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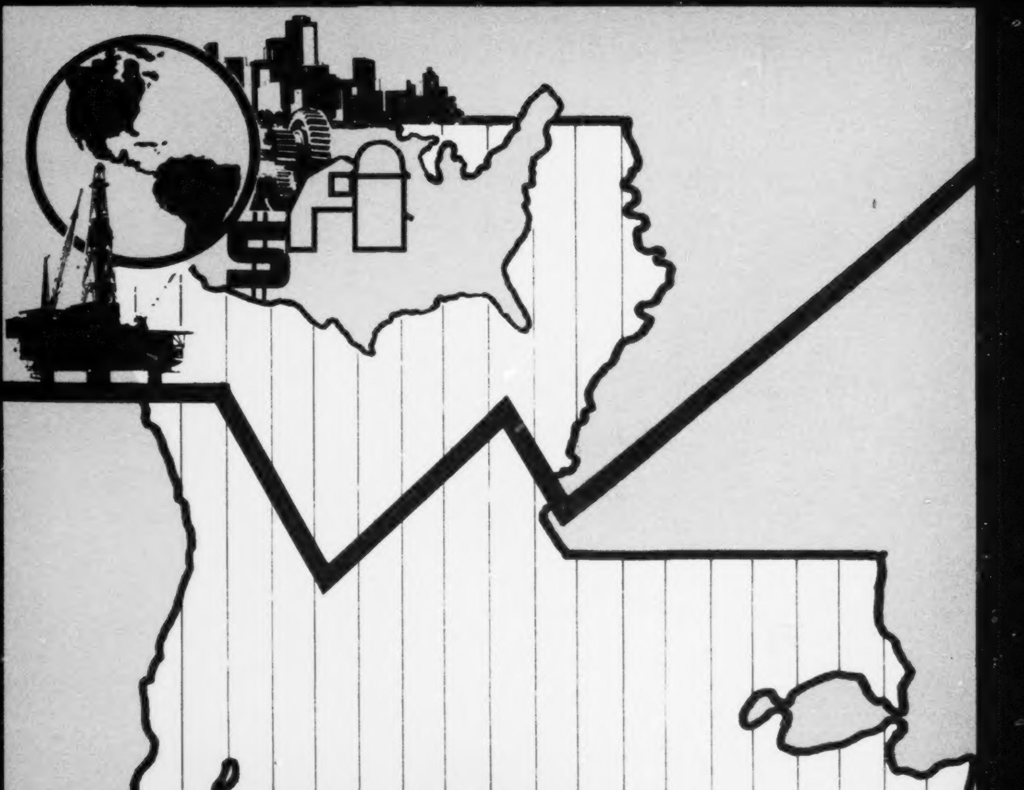
LOUISIANA BUSINESS REVIEW

Louisiana State University,
Baton Rouge



Louisiana's 1984 Economic Forecast

LETTER FROM THE EDITORIAL BOARD

Because the future is uncertain, we constantly strive to predict and shape it. The desire of man to influence his future is only one of the factors that make predictions so fragile and incomplete. Even though no one can predict the future with perfect certainty, we can make some educated guesses about it. In this issue of the **LBR,** four *LSU* economists present the forecasting results of the Louisiana Econometric Model (*LEM*). This information is provided with the expectation that it will be used by private and public decision-makers, along with other data, and personal judgments and instincts.

This is the second year in which the results of the *LEM* are presented, so, in addition to making projections of the state's economy for 1983, 1984 and 1985, the authors—professors James A. Richardson and Loren C. Scott and research economists A.M.M. Jamal and David J. Molina—present a comparison of their 1982 projections with the actual results from 1982.

The economic projections for 1984 and 1985 are generally encouraging. The *LEM* projects a 3.2-percent growth in Louisiana employment for 1984. The most noteworthy aspect of the projections is that the monitary income of the average Louisiana family will increase faster than the inflation rate.

LEM projects significant increases in business activity in the financial sector for 1984 and 1985, i.e. increases of 9.9 and 8.3 percent in total loans of commercial banks for these two years. With the exception of residential natural gas consumption, the *LEM* projects an upward swing in Louisiana's energy use. Unfortunately, it also forsees sluggish recovery in most energy-related sectors of the state economy. Oil and gas production is predicted to follow a decline that began in the early 1970s. The authors forsee a slight increase in drilling activiites in 1984 and 1985, which might have a favorable impact on energy production beyond the forecast period.

Richardson, *et al*, evaluate the performance of their model for 1982. They conclude *LEM* projections for aggregated data in 1982, such as total employment and total personal income, were fairly accurate. Unfortunately, some of the less-aggregated economic projections, such as contract construction and mining employment, were not as accurate as the researchers would have liked. The researchers report that a grant from the Louisiana Board of Regents is enabling them to expand the model to provide greater detailed and, hopefully, more accurate future projections.

The *LEM* reaches the following conclusions for 1984 and 1985:

Louisiana total employment is expected to grow by 3.2 percent in 1984 and 2.5 percent in 1985; employment in mining, contract construction, and durable goods manufacturing will show the greatest recovery of any state economic sector; total real personal income will increase by 4.4 percent in 1984 and 3.9 percent in 1985; the financial sector will show a steady and healthy growth; the energy consumption sector will follow general growth trends; and the energy production sector presents a mixed recovery picture, with an increase in producing gas wells, an overall increase in active rigs and producing oil wells, but decreases in overall oil and condensate production, and natural gas production.

In this issue's FORUM column, Fred E. Waddell reports that in September 1983, Louisiana's unemployment, at 11.6 percent, was the fifth-largest in the country. Waddell takes a closer look at unemployment and examines its direct and indirect costs to Louisiana.

The direct costs of unemployment are two-fold: it lowers output and increases transfer payments, such as unemployment payments and welfare. The indirect costs, as Waddell points out, are not easily quantifiable, but can, nonetheless, have grave consequences for the quality of life of the unemployed person and his family.

Factors addressed by Waddell include increases in the crime and suicide rates, as well as, a rise in the incidence of child abuse. Although Waddell's article omits some economic analyses and data which are relevant to any policy discussion of the effects and causes of unemployment, it does point out some broader societal costs produced by unemployment.

Increased production costs and

fierce competition from abroad have led the business community to search for cost effective production methods. Larry R. Smeltzer analyzes one of the methods that has become propular among some Louisiana firms—quality circle programs.

A quality circle program is a management technique in which a small group of employees and their supervisor meet on a voluntary, regular schedule, and discuss alternative production techniques that may improve the working conditions, morale, and productivity of their work unit. Smeltzer points out that, although quality control programs became popular in this country after their success in Japan, they were initially based on theories developed in the United States. He discusses some of the successes and failures of this technique and points to a lack of academic interest in quality circles until very recently.

This is the second issue of the **LBR,** and the first serial publication on Campus, to be typeset by our staff through the LSU computer system. Thanks to the invaluable assistance of Bob Jenkins, System Network Computer Center assistant director for user services, the **LBR** is being typeset through the Waterloo Script Text Formatting program on the IBM 3033 mainframe computer. A post-processing program is used to prepare the magazine for the Mergenthaler typesetting computer at Graphic Services. This change will cut weeks of time off the preparation of the **LBR.** ■

—The Editorial Board

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The views and opinions expressed in articles appearing in this publication are those of the individual authors, and do not necessarily represent those of the *LBR* Editorial Board or Louisiana State University, Baton Rouge.

The Editorial Board invites the submission of manuscripts to be considered for publication in this quarterly. Style sheets for manuscripts and manuscript abstracts are available upon request. Comments and suggestions on any material appearing in the *LBR* are also welcome.

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Upcoming Issues

Due dates for receipt of full manuscripts to be considered for publication in upcoming issues are:
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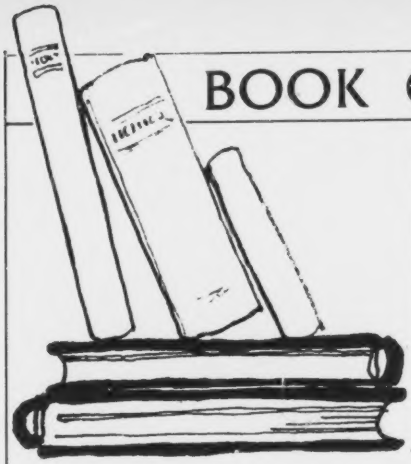

BOOK CORNER

Fail-Safe Business Negotiating: Strategies and Tactics for Success, by Philip Sperber (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1983), 297 pp.; $10.95, paper; $19.95, cloth.

Fail-Safe Business Negotiating is, as the title indicates, a book about how to be successful in business negotiations. The author is a professional negotiator and arbitrator, with many years of experience in engineering, sales, legal, and general management positions.

Sperber vividly explains all the secrets of successful negotiating in his book. The revelations range from the scoring of hidden victories by dressing correctly and the use of humor and appropriate quotations, to the technique of turning a "*no*" into a "*yes*." Various strategic positions also are discussed and evaluated, as well as the tactics of presenting one's own standpoint.

The importance of planning and prenegotiation maneuvers are heavily emphasized by the author, who claims they can greatly improve chances for a successful negotiation. Accordingly, useful hints in this matter are provided to the reader.

An entire chapter is devoted to the specific problems of negotiating typically encountered by the manager, and another to appropriate negotiating techniques for those who wish to accelerate their careers. There is a separate chapter dealing with special negotiating considerations for women executives.

One of the advantages of the book is its wealth of examples illustrating the discussed techniques. Another is that almost every chapter includes a set of questions designed to test the reader's proficiency in, and potential for, negotiating.

Fail-Safe Business Negotiating is well written, entertaining, and should be useful to every business person who is interested in making his view prevail.

-Per Lundberg

How to Find and Buy Good Software, by Jess W. Curry Jr. and David M. Bonner, (Englewood Cliffs, NJ: Prentice-Hall, 1982), 161 pp.; $8.95, paper; $17.95, cloth.

Most of the early pioneers who ventured out to purchase a microcomputer ended up sinking thousands of dollars into white elephants. *How to Find and Buy Good Software*, is a simple, nontechnical primer that should help prevent decision-makers in small businesses from repeating these mistakes.

This book outlines an eight-step procedure that guides the decision-maker in determining the functions in his business that should be automated by a micro-computer, and in planning the automation of these functions. It offers a sensible and thorough description on choosing the most suitable software vendor.

The best part of this book is its chapter that discusses how the decision-maker should survey and communicate with software vendors. Too often, inexperienced purchasers of business software have fallen prey to smooth-talking vendors, who appear to promise the world in their incomprehensible technical jargon, while attempting to cover up a basic ignorance of the capabilities of the products they are attempting to sell.

How to Find and Buy Good Software provides a glossary at the end of each chapter, in which computer jargon is clearly and concisely explained to the reader. The reader will be readily able to understand the basic words, and will become able to quickly find out if a vendor is using jargon to create a false impression.

The decision-maker should use this book in determining how to automate, and what software products should be purchased. It is not intended to guide the manager in the everyday administration of an automated system. A good sequel to this book would provide advice on designing a sound maintenance contract with the software vendor, so that he would quickly respond when *Murphy's Law* (If something can go wrong, it will.) goes into effect.

The authors suceed in using common sense and simple language to guide the nontechnical decision-maker through the initial steps of automating the functions of a small business with a micro-computer.

-Ralph Bradley

U.S. Government Publications

United States Congress, Office of Technology Assessment, *Industrial Energy Use*, Washington, D.C.: U.S. Government Printing Office, 1983, 174 pp., $6.00 (Stock Number 052-003-00915-3).

The high cost of energy in many areas of the United States has caused energy use to become a major concern for American industry. This report by the Office of Technology Assessment focuses on energy usage in American industry in general, and, more specifically, upon the largest energy-using companies—those in the pulp and paper, petroleum refining, chemical, and steel industries.

The study examines both the technological opportunities available to American industry, to make it more energy-efficient, and the forces working against implementing these changes. Of particular importance to Louisiana business is the report's detailed current analysis of energy use in the petroleum refining industry.

United States Department of Commerce, International Trade Administration, *An Assessment of U.S. Competitiveness in High Technology Industries*, Washington, D.C.: U.S. Government Printing Office, 1983, 68 pp., $5.00 (Stock Number 003-009-00358-0).

United States high technology industries continue to face increasingly strong challenges from other nations to their leading position in the world environment. Other countries, particularly Japan, have mounted successful major technological assaults on the United States' preeminent position in this area.

This study focuses in detail upon American high technology industries, including their importance to the American economy, their performance in international trade, and the key factors affecting their competitiveness with the technology of other nations. It offers key findings that will be of great importance to business leaders in these industries, particularly in understanding how other countries have been increasingly successful in the high technology field.

—Louis Vyhnanek

PER LUNDBURG is an AIESEC (Association Internationale des Etudiants en Sciences Economiques et Commerciales) trainee from Stockholm, Sweden. AIESEC is an international organization for exchange students in business and economics. RALPH BRADLEY is the Louisiana State Economist, and LOUIS VYHNANEK is a general librarian at the Middleton Library. ■

RESEARCH NOTES

Occupational Data System

The Division of Research and Development and the Governmental Services Institute at *Louisiana State University* recently completed the initial phase of its *Occupational Information System* for Louisiana, under a grant from the state Department of Labor.

The study develops projections of supply and demand for trained manpower in occupations usually requiring a college degree. It makes projections for the state, as well as the major SMSAs, and shows that by 1985 there will be a statewide shortage of managers, secretaries, public administrators, labor relations specialists, medical lab technologists, social workers, elementary and secondary school teachers, and a number of other occupations.

The largest surpluses are expected in occupations for generic social scientists, professional nurses, life scientists, lawyers, psychologists, economists, computer programmers, college teachers, sociologists, agricultural scientists, editors and reporters, mechanical engineers, and medical and dental technologists. Oversupplies are indicated for many occupations because the economic downturn moderated the expected growth in demand for manpower between 1980 and 1985.

If the recent upturn in the economy, that began in mid-1983, continues unabated, surpluses in most

(continued on page 29)

James A. Richardson, Loren C. Scott, A. M. M. Jamal and David J. Molina

Improvement Strategy? Louisiana's 1984 Economic Forecast

Economists at LSU were awarded a $65,000 grant from the Louisiana Board of Regents in September 1981 to build an econometric model of the state's economy. The results of that model were presented in a public forum on December 7, 1982 at *LSU*. A description of the Louisiana Econometric Model (*LEM*) and its forecasts was also published in the Spring, 1983 issue of the *Louisiana Business Review*.

The first section of this report contains the model forecasts for 1983, 1984, and 1985. This is our first effort to use the *LEM* to project beyond an eighteen-month time period. In Section III, we present evidence on the accuracy of the model in projecting 1982 economic behavior in the state. While we are pleased with the overall efficiency of the model, there are sectors in which the results are not up to our expectations. Measures to improve the model's efficiency are also considered in this section. Section IV contains a summary and the conclusions of this report.

In this section, the Louisiana Econometric Model (*LEM*) forecasts are presented for 1983 through 1985. Notice that projections must be made for 1983 because of lags in data availability; most economic source data for 1983 will not be available until sometime in 1984. *LEM* is driven by forecasts of the national economy from the Wharton econometric model; therefore, these foundational forecasts are discussed first, followed by the *LEM* forecasts for Louisiana.

U.S. Economic Forecasts

Most economic forecasters are offering optimistic national economic projections for the first time since 1980. *Table 1* illustrates the Wharton projections for several key economic variables over this three-year period. These forecasts suggest a firm, steady growth in gross national product, accompanied by a slow reduction in unemployment rates, and a slight increase in inflation rates, which are expected to remain well below the double-digit levels of the recent past.

This improvement in the national economy is expected to occur despite a slight increase in interest rates over the 1983-85 period. The Wharton Associates base this rate increase primarily on upward pressures on the demand for money caused by an expanding economy and the need to finance a rapidly-growing federal budget deficit.

Wharton Oil Forecast

The Wharton forecast for oil prices is very important to Louisiana's economy. The projections in the bottom row of *Table 1* are for a stabilization of oil prices throughout 1983, and then a gradual growth in oil prices in 1984 and 1985, as the growing national economy causes an increase in the demand for petroleum products.

The Wharton forecast for future oil price activity is perhaps the most crucial to the overall accuracy of the *LEM* projections for 1984 and 1985. The assumption of a stable oil price through 1984, then a slight rise in 1985, is based on the premise that the recent softening in oil prices (falling from $36 per barrel in 1981 to $30.35 for Louisiana sweet in late Fall, 1983) is due to the national and international business recession. This recession has reduced significantly the demand for petroleum products, placing downward pressure on their prices. The forecast in

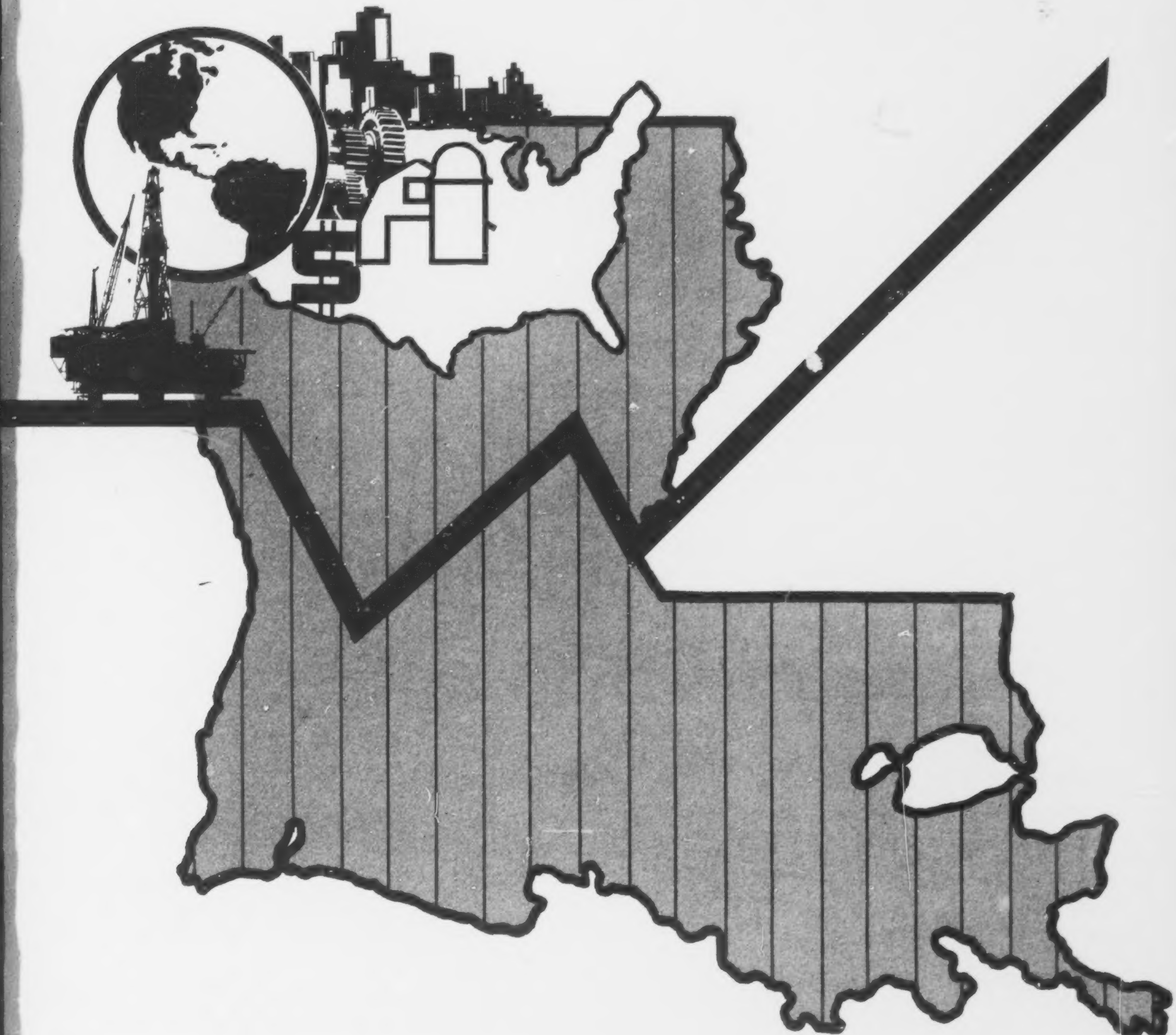

TABLE 1
Wharton's Projections for Selected Indicators for the U.S. Economy: 1983-1985

Indicator	1983	1984	1985
Real GNP (Growth Rate)	3.4%	5.7%	3.2%
Consumer Price Index (Growth Rate)	3.2%	5.0%	6.1%
Unemployment Rate	9.8%	8.7%	7.9%
3-Month Treasury Bill Rate	8.56%	9.08%	10.26%
AAA Utility Bond Rate (New Issues)	12.13%	12.63%	13.02%
OPEC Oil Price (Per Barrel)	$29.88	$30.28	$32.86

Source: *Quarterly Model Outlook*, Wharton Econometric Forecasting Associates, Vol. 2, Number 10 (October 1983).

TABLE 2
Louisiana Employment by Industrial Sector

Sector	Actual			Projected		Average Annual Growth Rate			
	1981	1982	1983	1984	1985	81-82	82-83	83-84	84-85
Farming	24,500	24,390	23,550	23,190	22,880	−.4	−3.4	−1.5	−1.3
Agricultural Services	7,290	7,740	7,820	8,040	8,260	6.2	1.0	2.8	2.8
Mining	99,300	98,900	93,370	98,330	103,530	−.4	−5.6	5.3	5.2
Contract Construction	138,200	123,700	117,990	126,080	131,090	−10.5	−4.6	6.9	4.0
Manufacturing: Durables	109,900	98,600	92,820	101,170	106,830	−10.3	−5.8	9.0	5.6
Manufacturing: Nondurables	112,200	107,100	103,320	104,770	104,770	−4.5	−3.5	1.4	-0-
Retail Trade	263,400	265,800	264,930	273,850	281,700	0.9	−0.3	3.4	2.9
Wholesale Trade	103,300	102,000	104,040	106,670	109,460	−1.3	2.0	2.5	2.6
Finance, Insurance, and Real Estate	77,700	79,300	80,280	81,740	83,220	2.1	1.2	1.8	1.8
Transportation, Communications & Public Utilities	132,700	129,500	131,170	132,060	133,970	−2.4	1.3	0.7	1.5
Services	290,100	302,300	311,950	322,020	332,327	4.2	3.2	3.2	3.1
Government: Federal	33,600	33,700	34,330	34,420	34,740	0.3	1.9	0.3	0.9
Government: State & Local	270,200	273,100	273,360	278,930	280,560	1.1	0.1	2.0	0.6
TOTAL EMPLOYMENT	**1,662,390**	**1,646,130**	**1,638,930**	**1,691,270**	**1,733,337**	**−1.0**	**−0.5**	**3.2**	**2.5**

the bottom row of *Table 1* presumes that, as the recovery picks up in both the national and international economies, the demand for petroleum products will increase, causing oil prices to firm up and gradually rise.

It should be acknowledged there is a growing body of opinion that argues the softening of oil prices is only partially due to the worldwide recession. These individuals contend that a combination of (1) the new oil supplies brought on the market from Mexico, Canada, Alaska, and the North Sea; and (2) the very significant energy conservation measures that individuals and businesses have taken since the mid-70s, will more than offset any upward price movements caused by the recovery. These forecasters foresee a further drop in oil prices to at least $25 a barrel in early 1984, and, in some cases, project declines to as low as $18 in the not too distant future!

The Wharton forecast was used in order to be consistent with the other forecasted national variables. If this oil price forecast is wrong, and oil prices decline, then several sectors of the Louisiana economy will be significantly affected. The oil and gas sector will be negatively influenced; the chemical industry will be positively influenced; and state revenues will decline substantially. The net effect depends upon the interaction of these three effects.

The Louisiana Forecasts

LEM projections for the Louisiana economy for the years 1983, 1984, and 1985 are illustrated in *Tables 2* through *8*. Actual values of each variable for 1981 and 1982 are shown in the first two columns of each table for comparison purposes, and annual growth rates for each year are given in the last four columns. The reader is advised that the numbers shown for each variable are the *average for the year;* consequently, the growth rates shown are for a period from approximately the middle of one calendar year to the middle of the next.

Employment

Table 2 contains actual and *LEM* projected figures for employment in Louisiana by two-digit Standard Industrial Classification (*SIC*) codes. As the third-from-the-last column in this table illustrates, the 1982-83 period is expected to remain a poor one for the state, with total employment continuing to fall from a peak reached in 1981.

Key Industries

The data for 1983 show that the key basic industries of mining, contract construction, and both manufacturing sectors will continue to experience significant drops in employment this year. In the case of mining, the drop can be traced to the debilitating effects on the industry of the previously-discussed uncertainty over the future course of oil and natural gas prices. Since *LEM* projections are based on the Wharton assumption of a reversal of recent trends and a gradual rise in oil prices, *LEM* forecasts this sector will recover and grow throughout 1984 and 1985.

Both the contract construction and the manufacturing sectors have been hurt in 1983 by continued high interest rates and the general slowdown in natural economic activity. Within the nondurable manufacturing sector, two major industries have been hampered by regulatory changes. The number of Louisiana petroleum refineries has fallen from thirty-five in 1980, to twenty-seven in 1983.

Many of the state's smaller refineries were beneficiaries of the entitlements program in force under oil price controls. When President Reagan decontrolled oil prices in 1981, the entitlements program ended, and, shortly thereafter, gasoline prices began to fall. These smaller refineries were unable to compete in such an environment and were shut down.

The chemical industry, which directly employs some 31,000 persons in Louisiana, has also suffered during the 1981-83 time period. The passage of the *Natural Gas Policy Act (NGPA) of 1978* has radically changed the pricing of natural gas, which this industry uses as a feedstock. The *NGPA* has put the industry at a competitive disadvantage, *vis-a-vis* its competitors in other states. Furthermore, the increase in the international value of the dollar, and the development of bulk chemical plants in Canada, Mexico, and the Mideast, has caused executives in these plants to become very cautious about any further expansions in Louisiana.

Because of these developments in the state's petroleum refining and chemical industries, *LEM* projects very little employment growth through 1985 for the nondurable goods manufacturing sector. The rather poor record predicted in this sector, however, will be more than offset by recoveries in the contract construction and durable manufacturing sectors in 1984 and 1985. These two basic industries will recover rather strongly, as the national economy recovers and interest rates stabilize.

Feeder Industries

As one examines employment trends in Louisiana's *feeder* industries, it is apparent that their performance is noticeably dependent on that of the basic industries. The trade, services, and finance sectors should behave weakly in 1983, and then begin a sustained recovery in 1984 and 1985.

State and local government employment, on the other hand, is expected to remain virtually stagnant over the entire 1983-85 time period. Activity in this high employment sector is heavily dependent on state revenue collections from the oil industry in the form of severance taxes, royalties, rentals, and bonuses. Given the projected slow growth in oil prices and the oil and gas production declines which are illustrated in *Table 14*, revenues from these sources will continue to drop rapidly during the 1983-85 period. Significant new revenue sources will have to be found very quickly by state officials just to maintain the anemic employment growth rates shown in *Table 2*.

Farm Sector

Note that employment in the relatively small farm sector is projected to decline continuously over the forecast period (1983-85). The Payment In Kind (*PIK*) program encourages farmers to reduce farming output. It provides farmers with a certain fraction of the expected crop yield, in return for the farmers' withdrawal of some acreage from production. The effect of *PIK* is to lower the cost of farming, and the need for additional labor. Employment in agricultural services, forestry, and fisheries will continue to increase, mainly because the demand for forestry and fishery products should continue to increase, state- as well as nationwide. The demand for forestry products is expected to grow, as housing construction and the demand for paper products continue to rise, due to the economic recovery. The demand for fishery products should also follow this pattern of economic growth.

Income and Population

Tables 3 through *5* contain data on Louisiana income by two-digit *SIC* industry, by major source, in total, and population figures. The services sector of the state—which includes such activities as hotels, beauty parlors, and other business services—remains not only the largest single employer, but also the largest generator of wage, salary, and proprietor's income in Louisiana. The service sector also is pro-

jected to enjoy the largest growth rates in income. This should take place, not only because of the employment increases forecasted earlier in *Table 2* but because of expected rapid increases in the prices of service products.

Table 4 illustrates the projected behavior of the components of state personal income over the 1983-85 period. Even though dividends, rent, and interest receipts should grow strongly over this period, the growth rates will be down somewhat from 1981-82. This is due primarily to a marked dropoff in interest rates from the high levels achieved in 1981.

The growth rates of transfer payments—which consist primarily of welfare payments, unemployment compensation payments and the like—are projected to slow markedly over the 1983-85 period, as the economy pulls out of the recession. Despite the burden of a depressed petroleum industry and the spillover effects of a national recession, real personal income in Louisiana actually grew in 1981-82, and it is expected to experience positive growth rates throughout the forecast period.

Table 5 contains data on state population movements which can be used to estimate state *per capita* income. Population growth rates in Louisiana are projected to decline gradually. This change in trend is due primarily to the decline in the projected migration to the state in 1983 and 1984, and to a small increase in 1985. The migration flow from other states has decreased, as the decline in oil prices has dampened drilling and related activities. The end result is a decline in historical population growth rates for the forecasted period.

The latest data (1982) on state *per capita* income shows this figure to be *$10,232*. In real terms, state *per capita* income should fall very slightly in 1983 (−0.3 percent), and then recover with the rest of the economy in the 1984-85 period. Louisiana real *per capita* income fell only slightly, despite the very severe national recession. If it had not been for the sharp drop in energy prices, the state economy would have experienced growth throughout the years of the national recession.

Financial Sector

Projecting the behavior of economic variables in Louisiana's banks and thrift institutions is clearly a courageous activity, in light of the unknown impacts of the constant deregulatory activities occurring in this sector. Forecasts in these sectors are based on Louisiana personal income, interest rates, and policies of the Federal Reserve Bank.

Earlier, in *Table 4*, it was shown that Louisiana personal income (undeflated) is projected to grow rapidly in 1983, 1984, and 1985, at rates of 6.6, 9.5, and 10.1 percent, respectively. Historically, deposits at banks and thrift institutions have grown a bit more rapidly than personal income. Indeed, the growth rate data on deposits in bank and thrift institutions—illustrated in *Table 6*—show they are projected to grow faster than state personal income.

One anomaly in *Table 6* is that bank loans are expected to grow very little in 1983. National data on the demand for bank loans reveal a flat- to slightly-declining behavior from 1982 to 1983. Businesses, in the face of uncertainty over future interest rates and economic conditions, have markedly cut back on business investment spending. This, in turn, has reduced their loan demand. Such behavior is expected to cause bank loans in Louisiana to grow only 4.7 percent in 1983, before beginning to grow more rapidly with the economy in 1984 and 1985.

TABLE 3
Louisiana Wage, Salary and Proprietors Income
(Millions of Dollars)

	Actual		Projected			Average Annual Growth Rate			
Sector	**1981**	**1982**	**1983**	**1984**	**1985**	**81-82**	**82-83**	**83-84**	**84-85**
Farming	368	376	425	464	517	2.0	13.0	9.3	11.4
Agricultural Services Forestry & Fisheries	114	123	135	146	160	7.2	10.1	8.1	9.3
Mining	2,910	3,094	3,284	3,698	4,223	6.3	6.1	12.6	14.2
Contract Construction	3,144	2,997	2,998	3,422	3,833	4.7	-0-	14.1	12.0
Manufacturing: Durables	2,508	2,361	2,297	2,729	3,149	−5.8	−2.7	18.8	15.4
Manufacturing: Nondurables	2,958	2,979	3,068	3,328	3,601	0.7	3.0	8.5	8.2
Retail Trade	2,927	3,092	3,186	3,363	3,583	5.6	3.0	5.6	6.6
Wholesale Trade	2,212	2,240	2,473	2,676	2,931	1.3	10.4	8.2	9.5
Finance, Insurance, and Real Estate	1,368	1,524	1,578	1,694	1,834	11.4	3.5	7.4	8.3
Transportation, Communications & Public Utilities	3,122	3,344	3,539	3,762	4,069	7.1	5.8	6.3	8.2
Services	4,932	5,530	6,500	7,432	8,488	12.1	17.5	14.0	14.0
Government: Federal	1,172	1,301	1,334	1,408	1,502	11.0	2.5	5.6	6.7
Government: State & Local	3,589	4,049	4,064	4,391	4,679	12.8	0.5	8.0	6.6

TABLE 4
Louisiana Personal Income by Major Source
(Millions of Dollars)

	Actual		Projected			Average Annual Growth Rate			
Sector	**1981**	**1982**	**1983**	**1984**	**1985**	**81-82**	**82-83**	**83-84**	**84-85**
Wage and Salary Income	31,331	33,016	34,880	38,514	42,569	5.4	5.6	10.4	10.5
Dividends, Rent, Interest	6,340	7,702	8,480	9,419	10,505	21.5	10.1	11.1	11.5
Transfer Payments	5,061	5,779	6,150	6,471	6,873	14.2	6.4	5.2	6.2
Less Social Insurance: Contributions	1,716	1,858	1,991	2,327	2,602	8.3	7.2	16.9	11.8
Personal Income	41,016	44,633	47,519	52,078	57,345	8.8	6.5	9.5	10.1
Real Personal Income	20,979	21,740	22,010	23,003	23,904	3.6	1.3	4.4	3.9

TABLE 5
Louisiana Population and Income Per Capita

	Actual		Projected			Average Annual Growth Rate			
Sector	**1981**	**1982**	**1983**	**1984**	**1985**	**81-82**	**82-83**	**83-84**	**84-85**
Population (thousands)	4,295	4,362	4,429	4,486	4,541	1.6	1.5	1.3	1.2
Nominal Income Per Capita	$9,550	$10,232	$10,730	$11,610	$12,630	7.1	4.9	8.1	8.8
Real Income Per Capita (1972 prices)	$4,885	$ 4,984	$ 4,970	$ 5,130	$ 5,260	2.0	−0.3	3.2	2.5

TABLE 6
Louisiana Financial Data
(Millions of Dollars)

	Actual		Projected			Average Annual Growth Rate			
Sector	**1981**	**1982**	**1983**	**1984**	**1985**	**81-82**	**82-83**	**83-84**	**84-85**
Commercial Banks:									
Total Deposits	23,738	25,871	29,614	33,340	37,607	9.0	14.5	12.6	12.8
Total Assets	28,401	30,894	35,429	39,913	45,056	8.8	14.7	12.7	12.9
Total Loans	14,784	14,539	15,224	16,724	18,106	−1.6	4.7	9.9	8.3
Securities	7,622	8,635	9,624	10,546	11,782	13.3	11.1	9.6	11.7
Savings & Loan Institutions:									
Savings Deposits	7,787	8,669	9,211	10,214	11,311	11.3	6.3	10.9	10.7
Total Assets	9,139	10,024	10,681	11,850	13,126	9.7	6.6	10.9	10.8

Energy Sector

There are two major parts to the energy component of *LEM*. One is the section dealing with energy *consumption*. These data are shown in *Table 7*. In *LEM*, energy consumption is related to growth in Louisiana personal income, economic condition, and specific energy prices. Growth in personal income and the recovery from the recession are expected to cause electricity consumption to rise throughout the forecast period. Natural gas consumption will not be nearly as robust.

Although incomes will be rising in the state, natural gas price increases—especially in 1983—are expected to mitigate significantly the positive impacts of income growth. Consequently, natural gas consumption by residential and commerical users should continue to decline in 1983, and grow only sluggishly, if at all, in the remaining periods. Industrial natural gas con-

TABLE 7
Louisiana Energy Consumption

Sector	Actual		Projected			Average Annual Growth Rate			
	1981	1982	1983	1984	1985	81-82	82-83	83-84	84-85
Electricity:[c]									
Residential	18,522	18,166	19,034	20,249	21,301	−1.9	4.8	6.4	5.2
Commercial & Industrial	38,198	35,967	38,676	41,651	44,367	−5.8	7.5	7.7	6.5
Natural Gas:[d]									
Residential	81,458	80,309.4[E]	75,202	77,569	76,764	−1.4	−6.4	3.2	−1.0
Commercial	31,348	30,449[E]	29,076	30,154	30,422	−2.9	−4.5	3.7	0.9
Industrial	1,409,455	1,479,259[E]	1,494,292	1,529,926	1,557,683	5.0	1.0	2.3	1.8

[c] Millions of kilowatt hours
[d] Millions of cubic feet
[E] Estimates

TABLE 8
Louisiana Energy Production

Sector	Actual		Projected			Average Annual Growth Rate			
	1981	1982	1983	1984	1985	81-82	82-83	83-84	84-85
Natural Gas Production (North)[a]	415	377	369	361	353	−9.2	−2.0	−2.1	−2.2
Natural Gas Production (South)	1,760	1,531	1,338	1,178	1,046	−13.1	−12.6	−11.9	−11.2
Natural Gas Production (Off)	374	359	355	358	366	4.1	−1.1	0.9	2.2
Natural Gas Production (Total)	2,550	2,266	2,062	1,898	1,765	−11.1	−9.0	−8.0	−7.0
Oil and Condensate Production[b] (North)	35,980	36,335	36,299	36,340	36,446	−1.0	−0.1	0.1	0.3
Oil and Condensate Production (South)	137,412	128,602	121,385	113,914	106,492	−6.4	−5.6	−6.2	−6.5
Oil and Condensate Production (Off)	26,283	24,811	24,859	24,759	24,505	−5.6	0.2	−0.4	−1.0
Oil and Condensate Production (Total)	199,675	189,748	182,543	175,013	167,443	−5.0	−3.8	−4.1	−4.3
Producing Oil Wells (North)	15,084	15,540	16,313	17,035	17,721	3.0	5.0	4.4	4.0
Producing Oil Wells (South)	6,061	6,607	6,414	6,231	6,058	9.0	−2.1	−2.8	−2.8
Producing Oil Wells (Off)	1,105	1,112	1,086	1,052	1,018	0.6	−2.3	−3.1	−3.2
Producing Oil Wells (Total)	22,250	23,259	23,813	24,318	24,997	4.5	2.4	2.1	2.8
Producing Gas Wells (North)	9,479	10,154	10,929	11,870	12,976	7.1	7.6	8.6	9.3
Producing Gas Wells (South)	3,226	3,137	3,112	3,123	3,145	−2.8	−0.8	0.4	0.7
Producing Gas Wells (Off)	557	564	582	605	630	1.3	3.2	4.0	4.1
Producing Gas Wells (Total)	13,262	13,855	14,623	15,598	16,751	4.5	5.5	6.7	7.4
Active Rigs (North)	119	164	125	125	126	37.8	−23.8	-0-	0.8
Active Rigs (South)	249	161	142	150	157	−35.3	−11.8	5.6	4.7
Active Rigs (Off)	18	12	11	10	10	−33.3	−8.3	−9.1	-0-
Active Rigs (Total)	386	337	278	285	293	−12.7	−17.5	2.5	2.8

[c] Millions of kilowatt hours
[d] Millions of cubic feet
[E] Estimates

TABLE 9
The Wharton Forecasts of National Economic Activity for 1982 Versus Actual Results

Model	Growth in Real GNP	Inflation (CPI)	Unemployment Rate
Wharton[a]	3.2%	5.5%	9.7%
Consensus[b]	3.1%	5.3%	9.6%
Actual	3.4%	3.2%	9.8%

[a] *Quarterly Model Outlook*, Wharton Econometric Associates, Vol. 1, Number 10, (November 1982)
[b] *Blue Chip Indicators* (November 10, 1982) Sedona, Arizona

sumption also will grow very little, primarily because of the problems in the heavy-using chemical industry which were mentioned earlier.

Production

Energy production data are presented in *Table 8*. As mentioned earlier, the energy production component of *LEM* has been expanded considerably this year, as a result of funding provided by a $17,500 grant from the Center for Energy Studies at LSU. The most important modification made in this sector was to move from a *statewide* production model to separate models for each of the three geological areas in the state: the north, south, and state offshore. The northern region is characterized by a large number of relatively unproductive wells, while the southern region has a smaller number of highly productive wells. At this point there are no equations in *LEM* for the *federally*-controlled areas of offshore Louisiana.

When examining *Table 8* one is struck by the number of minus signs in the growth rate columns. Oil and gas production in Louisiana peaked in the 1969-71 period and have been declining rapidly ever since. The primary reason for the plummeting total production figures can be found by examining the regional profiles. The fundamental problem is that, in the usually prolific southern region of the state, there has been a significant decline in production.

Given these projected production declines, and the very slow upward movement in oil prices predicted by Wharton, state severance taxes will be falling significantly and will constitute a major fiscal drag on the state budget. Again, some new taxes or fees are virtually inevitable, if the state is to maintain the existing level of public services.

Table 8 suggests that, while production levels should decline over the entire forecast period, there is some hope for recovery in the exploration industry. If the Wharton oil price forecast is correct, and operators in this industry see oil prices stabilize and begin to drift upwards, they will increase drilling activities in Louisiana. This is reflected by a positive growth rate in the number of active drilling rigs in the state (last row of *Table 14*). It is encouraging to see that *LEM* projects most of this drilling activity to occur in the southern region of the state. It should be noted that even if these new drilling activities are quite successful, the resulting new oil and gas production will not begin to show up until late 1985 or 1986.

A Look at the 1982 Forecasts

Last year was the first time the *LEM* was used to forecast the Louisiana economy. With almost one year of experience behind us, we can now compare the accuracy of *LEM's* forecast with actual experience. The *LEM* is constructed in such a way that forecasts of Louisiana economic variables depend on forecasts of the behavior of the natural economy provided by the Wharton Econometric Model.[1] Thus, the accuracy of the *LEM* forecasts depends crucially on the forecasting efficiency of the Wharton Model.

Table 9 contains information suggesting that the Wharton model performed well in projecting national economic trends. Wharton's forecasts were pretty much in line with the consensus forecasts of some forty-six other national economic models, and, with the exception of the rate of change of inflation (CPI), Wharton estimates for national economic behavior were very close to the mark. Since almost all the other national models also failed to capture the extent of the slowdown in inflation in 1982, we conclude the Wharton model is a reliable source of national forecasts.

Tables 10 through *14* contain data which compare *LEM* forecasts for 1982 with actual behavior in that year. A cursory review of these tables leads to the following conclusions. First, the *aggregate* forecasts of the model were quite good. Total wage and salary employment for 1982 was missed by only 0.7 percent. Total wage, salary, and proprietors income was off only 2.2 percent (*Table 11*), and total personal income and *per capita* income estimates were different from actuals by only 1 percent and 1.3 percent, respectively (*Table 12*).

These are important variables to forecast correctly, since they feed directly into the rest of the model. For example, *Table 13* compares actual versus projected numbers for the financial sector of *LEM*. Estimates of bank deposits and assets, which depend upon state income growth, were right on the mark. Projections of deposits and assets at savings and loan institutions did not perform quite as well, but were certainly acceptable, given the radically changing regulatory environment this industry experienced in 1982.

TABLE 10
Louisiana Employment by Industrial Sector: Actual Versus Predicted in 1982

Sector	1982 Actual	1982 Predicted	Percent Error
Farming	24,392	24,125	−1.1
Agricultural Services	7,740	7,011	−9.4
Contract Construction	123,447	132,470	7.3
Manufacturing: Durables	96,311	101,712	5.6
Manufacturing: Non-durables	106,049	100,112	5.6
Retail Trade	266,887	258,310	−3.2
Wholesale Trade	100,467	104,660	4.2
Mining	94,822	100,527	6.0
Finance, Insurance, and Real Estate	80,891	77,272	−4.5
Transportation, Communications & Public Utilities	127,737	133,367	4.4
Services	354,605	336,886	−5.0
Government: Federal	33,570	33,961	1.2
Government: State & Local	276,275	270,750	−2.0
TOTAL EMPLOYMENT	**1,693,193**	**1,681,153**	**−0.7**

TABLE 11
Louisiana Wage, Salary, and Proprietors Income: Actual Versus Predicted—1982
(Thousands of Dollars)

Sector	1982 Actual	1982 Predicted	Percent Error
Farming	$ 376,146	$ 358,141	−4.8%
Agricultural Services	123,126	124,000	0.7
Mining	3,094,265	3,346,892	8.2
Contract Construction	2,997,940	3,256,113	8.6
Manufacturing: Durables	2,361,386	2,458,350	4.1
Manufacturing: Non-durables	2,979,501	2,903,269	−2.6
Retail Trade	3,092,658	2,968,616	−4.0
Wholesale Trade	2,240,097	2,373,706	−6.0
Finance, Insurance, and Real Estate	1,524,868	1,443,978	−5.3
Transportation, Communications & Public Utilities	3,344,455	3,572,568	6.8
Services	5,530,954	5,883,972	6.4
Government: Federal	1,301,674	1,232,520	−5.3
Government: State & Local	4,049,293	3,835,078	−5.3
TOTAL WAGE, SALARY AND PROPRIETORS INCOME	**$33,016,363**	**$33,757,203**	**2.2%**

Despite the accuracy of this forecasting record for the *aggregate* variables in the model, we were less effective in projecting behavior at the disaggregated level. For example, a look at the detailed industry employment forecasts in *Table 9* shows that inaccuracies of four percent or more were not uncommon, and errors exceeded 6 percent in some fairly large sectors [e.g. mining and contract construction].

Three more of the greater detailed areas performed rather poorly. The *LEM* failed to capture the sluggish behavior of bank loan demand in 1982, and overestimated that variable by 8.9 percent (*Table 13*). Similarly, the model underestimated the degree of drop-off in natural gas production by over 10 percent (*Table 14*). Finally, *LEM* did well in predicting residential electricity demand in 1982, but in the much larger commercial/industrial sector, the error was in excess of − 15 percent (*Table 14*).

In light of this performance, four corrective measures have been taken to improve the efficiency of the model. First, the sources of employment data have been changed. Rather than using the employment data from the U.S. Bureau of Economic Analysis, the model will use data provided by the Louisiana Department of Employment Security. These latter data are available on a more timely basis than the federal source, which should enhance the model's efficiency.

Second, a new $55,000 grant has been received from the Louisiana Board of Regents. The purpose of this grant is to achieve two objectives. One is to break the industry employment numbers down into even finer detail. For example, next year *LEM* will project not only Retail Trade employment in the aggregate, but also employment in its sub-categories, such as General Merchandise, Grocery Stores, and Auto Dealers. Also, this grant will enable us to make forecasts for the seven major cities in Louisiana. By working *from the bottom up*, that is, from these detailed categories up to the aggregate levels, the forecasting ability of *LEM* should be further improved.

Third, a $17,000 grant was received from the LSU Center for Energy Studies to break the energy production sector down into greater detail. Future forecasts will be made for oil and gas production, number of producing wells, and drilling activity in the three distinct geological areas of the state. Once again, this *bottom-up* procedure should improve the forecasting ability of the model.

Finally, a great deal of work has been put into re-estimating many of the equations this year, especially those that performed poorly in 1982. Hopefully, the combination of these four corrective measures will add significantly to the quality of future *LEM* forecasts.

TABLE 12
Louisiana Personal Income by Margin Source and Population: Actual Versus Predicted—1982
(Thousands of Dollars)

Sector	1982 Actual	1982 Predicted	Percent Error
Wage and Salary Income	$33,016,363	$33,757,203	2.2%
Dividend, Rent, Interest	7,701,883	7,561,457	−1.9
Transfer Payments	5,778,953	5,464,089	−5.7
Less: Social Security Contributions	1,857,582	1,787,142	−3.9
Personal Income	44,633,010	44,154,750	−1.0
Real Personal Income	21,740,000	21,455,200	−1.3
Nominal Personal Income Per Capita (in dollars)	10,232,000	10,104,000	−1.3
Real Income Per Capita (1972 dollars)	4,984,000	4,910,000	−1.5
Population (thousands)	4,362,000	4,370,000	0.1

TABLE 13
Louisiana Financial Data: Actual Versus Predicted—1982
(Thousands of Dollars)

Sector	1982 Actual	1982 Predicted	Percent Error
Commercial Banks:			
Total Deposits	$25,871,550	$25,911,874	0.2
Total Assets	30,894,210	31,018,115	0.4
Total Loans	14,539,120	15,967,585	8.9
Securities	8,635,469	8,308,113	−3.9
Savings & Loan Institutions:			
Savings Deposits	8,669,849	8,296,000	−4.5
Total Assets	10,024,340	9,752,400	−2.8

TABLE 14
Louisiana Energy Production and Consumption: Actual Versus Predicted—1982

Sector	1982 Actual	1982 Predicted	Percent Error
Energy Supply:			
Natural Gas Production[a]	2,266	2,528	10.4
Oil and Condensate Production[b]	189,748	187,631	−1.1
Producing Oil Wells	23,259	24,193	3.9
Producing Gas Wells	13,855	13,987	0.9
Active Rigs (monthly average)	NCD	NCD	NCD
Energy Consumption:			
Electricity:[c]			
Residential	18,166	17,742	−2.4
Commercial and Industrial	35,967	31,109	−15.6
Natural Gas:[d]			
Residential	NCD	NCD	NCD
Commercial	NCD	NCD	NCD
Industrial	NCD	NCD	NCD

[a] Billions of cubic feet
[b] Thousands of barrels
[c] Millions of kilowatt hours
[d] Millions of cubic feet
NCD = Not compatible data

Summary and Conclusions

The forecasts contained in *Tables 2 through 8* show that the overall state economy will experience a slight improvement in 1983, although some of the key sectors, such as mining, manufacturing, and construction, will still be facing a decline. The outlook for 1984 and 1985 is more encouraging. Employment gains are expected in these basic industries. These will, in turn, generate a significant increase in income in nearly all the sectors of the economy.

Our projections show that the state economy will outperform the national economy in 1984 and 1985. The crucial assumption underlying our forecasts is the price of oil. It directly affects mining and large portions of manufacturing activities. State government revenues are also heavily dependent on the severence tax from oil and gas extraction. We have assumed the price of crude oil to be approximately $30 per barrel in 1983, and increasing moderately in 1984 and 1985. Consequently, the forecasts presented here will be greatly affected if the price of crude oil does not follow this assumed pattern.

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The authors wish to acknowledge James Runge for his invaluable computer assistance. ■

Endnote

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[1] A complete description of the model can be found in Loren C. Scott, James A. Richardson, and A. M. M. Jamal, "Louisiana's 1983 Economic Outlook", *Louisiana Business Review* (Spring 1983).

NATIONAL NEWS

ICC Delays Deregulation

The Interstate Commerce Commission has voted to delay its planned deregulation of railroad boxcar traffic from Nov. 7, until Jan. 1. The apparent purpose of the delay is to allow time for response to the ICC's recent denial of a petition to reconsider the ruling. The commission also has delayed until July 1, 1984, the effective date of deregulation for boxcar rental fees as they apply to shortline railroads.

New Directions Grants Available

The Occupational Safety and Health Administration (OSHA) has invited applications from nonprofit labor and management groups for grants to help provide training, education, and other job safety and health services under its New Directions program. The agency expects to award approximately $2 million for new planning and development grants. OSHA currently provides funds to some 90 organizations, and devotes $6.8 million per year to its grant program.

Assistant Secretary of Labor Thorne G. Auchter, who heads OSHA, says consortia—which can include universities or other nonprofit organizations—also may submit applications. A consortium, however, must have a labor group or management group as the member responsible for submitting the proposal and administering the grant.

Executives Like Small Towns

While certain large cities and their suburbs continue to be favored by many who relocate, small-town life has become the first choice of a growing number of corporate executives, according to a report by Thorndike Deland Associates, a New York executive search firm. The firm believes that rising housing costs have had the effect of exposing business executives to the amenities of rural life.

This marks a shift in basic sensibility and a better appreciation of what quality of life actually means. For more and more people it is not the presence of a municipal opera company, a repertory theater, or a landscaped shopping mall that is important. They are attracted by the safety, the clean air, and the human closeness that they expect to find in small communities away from the big city, the report concludes.

Occidental In Good Position

Dr. Armand Hammer, chairman and chief executive officer of Occidental Petroleum Corp., says that following the acquisition of the vast domestic reserves of Cities Service Company and repayment of $3 billion in debt, "Occidental is in its best strategic position since I became chairman in 1957." Occidental now has a "virtual balance between our domestic and foreign oil and gas operations," he said, with worldwide reserves totaling 1 billion barrels of oil and 3 trillion cubic feet of natural gas. "It can no longer be said that Occidental's resource base is vulnerable to the uncertainties of political forces in far corners of the globe," Hammer pronounced.

U.S. Farm Exports Decline

Farm export value declined in 1982, and is expected to drop again this year, according to Michael T. Belongia of the Federal Reserve Bank of St. Louis. During the 1970s, the dollar value of farm product exports grew at an annual rate of nearly 20 percent, and now represents nearly 20 percent of total American exports. This fiscal year, farm exports are expected to be valued at about $34.5 billion, down from $39.1 billion a year ago. From the 1981 peak export value of $43.8 billion, the estimate for fiscal year 1983 represents a 21-percent decline in the value of farm exports in just two years, he said.

Marketing Strategy Stressed

Marketing strategy is seen as the most significant planning challenge of the 1980s, while controlling costs is viewed as an ongoing challenge often considered tantamount to survival, according to a study released jointly by the management consulting services of Coopers & Lybrand and the research firm of Yankelovich, Skelly & White.

Only three out of twenty-six business issues presented to 250 senior executives representing a cross-section of American companies were chosen by a majority of respondents as becoming more important to companies through the remainder of the decade. These were competitive pressures, 54 percent; adjustments in customer base/customer demand, 54 percent; and defining market strategy, 53 percent.

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LOUISIANA BULLETIN

Software Industry Trade Fair

Softcon, the international conference and trade fair for the software industry, will be held February 21-23, in the New Orleans Superdome. The fair will be a trade-only event, featuring some 1,800 booths, 100 industry seminars, panel discussions, conferences, and workshops. Registration is $30 for an exhibits-only badge, and $195 for the full conference program and exhibition hall badge. For information, call (800) 841-7000.

Foreign Trade Directory

The third edition of the International Trade Mart's *Louisiana Foreign Trade Directory* is being prepared, and will be available for distribution in early 1984. Louisiana firms engaged in international commerce can be included in the 1984 directory free of charge by contacting the ITM Business Department at (504) 529-1601.

Sponsored by ITM, the U.S. Department of Commerce/Louisiana District Export Council, the Louisiana Department of Commerce, and Louisiana World Exposition, Inc., the trade directory contains a comprehensive listing of more than 2,000 Louisiana exporters and importers, port and steamship services, freight forwarders, air carriers, international banks, trade organizations, chambers of commerce, foreign consulates and trade commissioners, customs offices, free trade zones, ports, buying agents for foreign governments, and even country languages and commercial holidays. The directories sell for $25.

CZ Building Sawmill

A $30 million wood products facility is being constructed near McComb, MS, by Crown Zellerbach. The new facility, scheduled to begin operation in late 1984, will produce 100 million board feet per year of dimension lumber for the residential construction market. Byproduct chips and fuelwood from the new facility will be used by the company's pulp and paper mills at Bogalusa and St. Francisville.

World's Fair Information Center

A newly-operational information center for the 1984 Louisiana World Exposition is providing answers to the public on every aspect of the event, which is scheduled from May 12 through November. The center serves as the primary source for fair information, including ticket data and entertainment scheduling. Simply call (504) 525-FAIR.

LSU Innovation Center

The LSU Innovation Center is providing inventors and investors with an objective source for determining the feasibility of new products and ideas. Further information about the program may be obtained through contacting the Development Assistance Division of the Office of Commerce & Industry, P.O. Box 44185, Baton Rouge, LA 70804.

Waterways Chairman Is Elected

L.E. (Les) Sutton of New Orleans, president of Dravco Mechling Corp., is the newly elected chairman of the National Waterways Conference's seventy-five member board of directors. He succeeds Richard A. Wilson of St. Louis, president and chief executive officer of Agri-Trans Corp.

Baton Rouge Gets Coal Facility

Ryan-Walsh Stevedores of Mobile, and P&C Bituminous Coal, Inc., of Nashville, have entered into a joint venture to construct and operate a midstream sampling and blending facility, to be placed in operation this fall. The establishment of *Coal Monitor One* is the ultimate in mid-stream transfer of coal. It will also have the capacity to aerate and cool coal as it is transferred from barge to vessel. The ship loading boom will be capable of moving coal at a rate of 1,800 metric tons an hour.

Old Brewhouse to Open

The Old Brewhouse is set to open early next summer at New Orleans. It is the first phase of a Jackson Brewery Development Corporation project that will stretch all the way from Jackson Square to Canal Place, and include the redevelopment of the riverfront of the Vieux Carre. The Brewhouse will comprise 65,000 square feet of leaseable space dedicated to specialty retail, food and entertainment.

Stanley Steemer in Baton Rouge

Stanley Steemer International, Inc., one of the largest retail carpet cleaning services in the nation,

(continued on page 29)

Fred E. Waddell

FORUM

Direct and Indirect Costs of Unemployment to Louisiana

There were, in the United States, some 11 million persons—9.3 percent of the work force—categorized as being unemployed during September.[1] This 9.3 percent, however, is far from representative of the true picture, inasmuch as it fails to include those persons who are employed only part-time (6.5 million), or those who have dropped out of the labor market altogether (another 1.8 million people).[2] If these 8.3 million additional persons were to be included in the national unemployment count, the September rate would be about 14 percent.

National unemployment figures do not provide Americans with an accurate perception of the extent of the problem in their society. The actual rate of domestic unemployment is understated by United States Department of Labor (USDOL) statistics, because only the percentage of persons unemployed at any given time is measured. About 22 percent of the national workforce was unemployed at some time during 1982, and another 20 percent will be jobless at some point during 1983.[3] Furthermore, about 46 percent of the work force will experience unemployment sometime during the decade.[4]

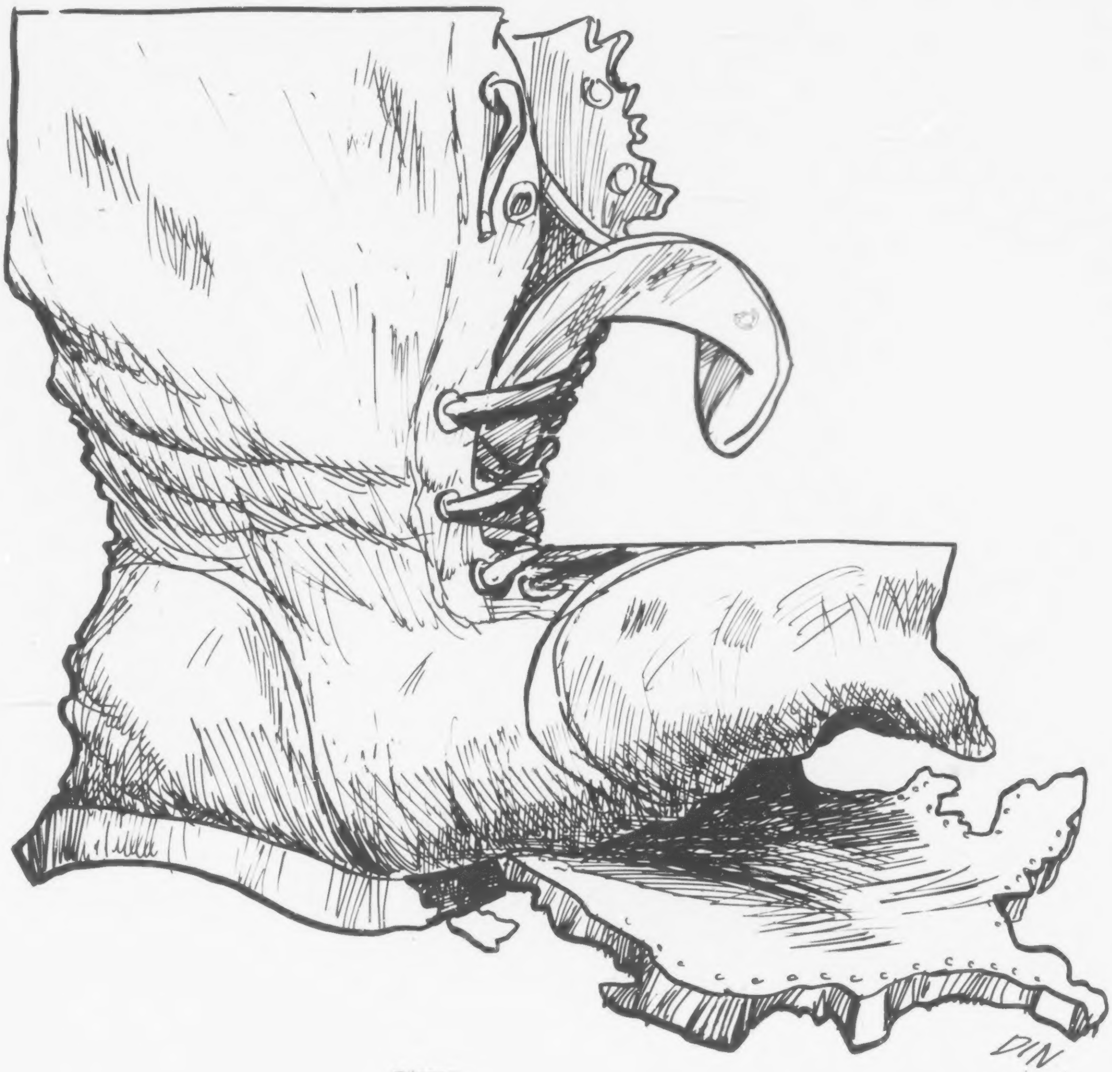
Another weakness in the USDOL figures is that they fail to address the problem of the growth of the national average length of unemployment from thirteen weeks in December 1980, to more than twenty weeks at the joblessness peak last summer.[5] National figures show that some 2.8 million unemployed workers (21.3 percent of the workforce) have been unemployed for twenty-seven weeks or longer, including 1.6 million (14 percent) who have been out of work for more than a year.[6] Before subsiding, the number of unemployed rose by 43 percent after July 1981, but the total weeks of unemployment more than doubled, rising 108 percent as a result of the increase in the duration of unemployment.[7]

The current recession and high level of unemployment is much more serious than that of 1973-75, because 78 percent of the unemployed then were receiving unemployment benefits, which were available for up to sixty-five weeks. Today, only 32.8 percent of the unemployed are receiving such benefits.[8] Two out of five of these people do not expect to be recalled to work by their former employers.[9]

Louisiana unemployment for September 1983 was 11.6 percent (221,700 people), the fifth-highest in the nation.[10] About 24 percent of Louisiana households had at least one jobless family member during the June unemployment peak. Duration of unemployment in Louisiana has grown from an average of seven to twenty-one weeks in the past thirty months.[11] Only 45.9 percent of the state's jobless are covered by unemployment benefits, and this could drop to 39.1 percent in the coming months, since more than 124,479 unemployed Louisianians already have exhausted their benefits.[12]

Initial 1982 Louisiana unemployment claims totaled 427,141—an increase of 50 percent over 1981. A total 485,235 claims were filed by the end of September 1983, representing an annualized rate of increase of 50 percent over the previous year. The level of unemployment benefits paid in Louisiana in 1982 more than doubled from 1981, totaling $483,271,759. Payments increased at a rate of 86 percent in 1983, and reached $674,692,224 by September 30.[13]

In the first nine months of 1983, over 147,000 persons in Louisiana had exhausted their unemployment benefits.[14] The direct costs of unemployment reflected in lost productivity and unemployment payments are huge, and have produced a sizeable deficit in the state's Unemployment Compensation Fund, which had to be covered by federal government loans.



Another aspect of the high state unemployment is that there are more than $8.4 million in overpayments of unemployment benefits outstanding in Louisiana. Some of these overpayments are assessed by the state Office of Employment Security as a result of investigations of persons who continued to claim benefits after having returned to work.

Approximately 20 percent of Louisiana unemployment overpayments become classified as fraudulent and are subject to state felony theft statutes. Usually these reemployed persons continue to claim unemployment benefits to meet past living expenses and other financial arrearages incurred during prolonged periods without regular employment income. Thus, an entirely new and increasing class of felony criminals is being created as a result of unemployment.[15]

Failures and Bankruptcies

Nationally, business failures have averaged 612 a week in 1983,[16] and at the start of 1983 there were more than 700,000 pending bankruptcy petitions. An additional 10,000 new bankruptcy petitions are being filed every week.[17]

Both personal and business bankruptcies in Louisiana increased by 30 percent in recent years, growing from 4,894 in 1980, to 6,382 in 1982. They are being filed at a rate of about eighteen new petitions daily.[98] The Corporation Division of the Louisiana Secretary of State's Office adds that some 4,070 foreign and domestic corporations also stopped doing business in

Louisiana in the last three years.[99]

In 1982 alone, an average of four foreign and domestic corporations ceased doing business every day, laying off thousands of workers, depriving the state of needed tax revenues, and contributing to the overall decline of the economy. While these lost corporations produce unemployment, they also are the product of unemployment, a result of the direct and indirect impact of a stagnating economy.

Nationally, the significant rise in unemployment has resulted in tremendous costs, not only to the economy, but also to the national quality of life. Regardless of whether one chooses to refer to the recent economic situation as a severe recession or a mild depression, and regardless of the speed of recovery, the impact of unemployment on American life has been severe and is likely to persist for many years.

Direct Unemployment Costs

While some of the direct costs of unemployment, such as benefit payments, lost productivity, and business failures, are measurable, the price in terms of human suffering is far less obvious and far more extensive. For example, a task force of the U.S. Conference of Mayors concluded that the most significant characteristic of the increasing number of homeless Americans (now 32 million) was their common unemployment.

An October 1983 newspaper article reported the growing ranks of persons in food lines throughout America.[20] The Center on Budget and Policy Priorities, a non-profit research group in Washington, D.C., surveyed 181 emergency food programs throughout the country. More than half reported that the number of free meals or food baskets provided had increased by at least 50 percent during the year, and that nearly one-third of the programs had doubled in size in the same period.

Nearly all of the agencies identified a sizable number of unemployed workers among those seeking aid. Nine out of ten of the emergency programs also reported that a significant proportion of the people served were those whose food stamps had run out before the end of the month. The situation was described as growing increasingly worse, and claims were made that a whole new class of poor is being created—the extended jobless who have used up all of their unemployment benefits.[21]

The nation's poverty rate rose to 15 percent in 1982—the highest level since 1965—as 2.6 million people were added to the rolls of the poor. Measured on the basis of monetary income only, the number of people below the poverty level increased by 8.1 percent, to 34.4 million.[22] Some 32 million Americans now draw some form of welfare benefits, and the welfare component of the American economy increased by $142.1 billion, or 73 percent, from 1976 to 1981. This is an adjusted excess burden of $35.7 billion on the nation's taxpayers.[23]

Louisiana's 1982-1983 fiscal year saw about 500,000 persons receive $152,799,381 in welfare benefits, an increase of nearly $10 million from the previous year.[24] Food stamp applications and payments have increased proportionately with the rise in unemployment.

Applications for food stamps now (October 1983) total 194,000 certified cases, the highest ever in the state's history. Expenditures on the food stamp program in Louisiana are expected to increase by about 33 percent, from $201,247,112 in 1982 to $300 million, by the end of 1983.[25] Spending for social programs in Louisiana increased by $2.2 billion, or 77 percent, while the state's population increased by 9 percent, resulting in an excess dollar burden of $470 million (16 percent of the 1976 base) to Louisiana's taxpayers.[26]

Other Indirect Costs

Unemployment is acknowledged to have serious repercussions including mental illness, alcohol and drug abuse, spousal and child abuse, infant death, family dissolution, serious disease and crime. Professor M. Harvey Brenner of Johns Hopkins University found that the effects of unemployment are cumulative and persist for as long as fifteen years after unemployment peaks.[27] For example, in the first three years after a peak in unemployment, imprisonment and suicide increase; in the next three years there is a rise in deaths from chronic disease.

Professor Brenner, in an estimate prepared for the Congressional Joint Economic Council has documented his claim that a mere one-percent rise in unemployment results in a

4.1-percent increase in suicides,

4.3-percent increase in male admissions to mental hospitals,

2.3-percent rise for female admissions, *1.9-percent increase in the death rate from serious diseases,*

5.7-percent increase in murders, and a

4-percent rise in state prison incarcerations.

If these statistics can be applied to Louisiana, then we might expect the 4.1 percent rise in unemployment by June of 1983 to result in a

22-percent increase in suicides;

23-percent increase in male, and 9.4 percent increase in female admissions to mental hospitals;

10-percent increase in the death rate from serious diseases;

30-percent increase in murders; and a

21-percent increase in state prison incarcerations.

Unemployment and Crime

Dr. Thomas Johnson of the Michigan Bureau of Corrections studied the effects of unemployment on crime in his state, which has experienced the nation's highest unemployment and largest increase in property crimes of the past ten years.[28] Dr. Johnson showed that after a time lag following a rise in unemployment, when unemployment increases, so does crime. This occurs, however, only when unemployment has reached about 5.5 percent or more. An unemployment rate below 5.5 percent, then, generally represents persons between jobs as well as the unemployable. Yet, as the rate rises above 5.5 percent, more and more persons who have job skills become unemployed and, eventually, part of the crime statistics.

Statistics recently released by the Federal Bureau of Investigation report crimes in Louisiana in 1982 increased slightly (2 percent over 1981), while the national incidence of crime declined.[29] The FBI reported that 231,674 crimes were reported to Louisiana law enforcement agencies in 1982, up from 226,773 in 1981. Increases were shown in five of the seven categories surveyed.

According to the Baton Rouge Police Department, robbery increased by 22 percent, and assaults by 15 percent, in 1982; and arrests increased by 7 percent, from 28,599 in 1981 to 30,589 in 1982.[30] The total dollar loss resulting from crime in these cases is over $23 million.

Staff members of the Louisiana Department of Corrections project that, at the current rate of sixty-six new prison admissions per month, a new prison would be needed in Louisiana every fourteen months to accommodate the increase of new prisoners.[31] In addition to the cost of prison construction, it takes about $10,000 a year to maintain each convict in a penitentiary.[32]

Child Abuse

Another distressing effect of unemployment is its relationship to child abuse and infant mortality. Anne Cohn, executive director of the National Committee for the Prevention of Child Abuse (NCPCA), says, "we do know the unemployment rate has skyrocketed this year as has the number of child deaths." A nationwide survey found that thirty-three states, she points out, reported more severe incidents of child abuse, and fourteen states reported an increased number of deaths as a result of child abuse. Only five states observed no increases.[33]

For every reported case, two are said to go unreported. Jim Harrel, another NCPCA spokesman, estimates there are 1.1 million cases of neglect and abuse each year, or 2,739 children every day. More than thirteen children per day die as a result of this abuse, he says.[33]

Richard B. Krugman, director of the C. Henry Kempe National Center for the Prevention and Treatment of Child Abuse and Neglect at Denver, found that a 67-percent increase in Colorado unemployment, during the past four years, is related to a doubling in the number of child abuse cases.[34] "What this means is that unemployment is causing stress on families, and their inability to deal with it is causing many parents to abuse their children," observes Thomas Birch of the National Child Abuse Coalition. Birch's group represents fifteen organizations concerned about children and their families.[35]

There were 6,912 substantiated Louisiana cases of child abuse in 1980; 8,511 in 1981; and 14,406 in 1982; or nearly forty children each day. Statistics indicate there has been a 70-percent increase in such abuse in 1983.[36] These figures, of course, do not reflect unreported instances of child abuse. It is not known how many of them result from the family stresses of parental unemployment, but the possibility cannot be ignored.

In addition to contributing to an increase in child abuse, unemployment can be shown to result in an increase in infant mortality. The significant increase in unemployment in Michigan, and a corresponding rise in infant mortality in that state resulted, in an infant death rate higher than that in some underdeveloped countries. *The United States now ranks a dismal nineteenth in infant mortality among all countries.*[37] Infant mortality and infant malnutrition frequently occur when mothers believe they cannot afford to buy daily formula for their infants, and try to substitute diluted formula or sugared water.

Suicide and Mental Health

Professor Brenner found that a one-percent rise in unemployment led to a 4.1 percent increase in suicides. Two other researchers, Drs. Dennis Ahlburg of the University of Minnesota and Morton Schapiro of Williams College, have spent the past thirty months studying the effects of unemployment and suicide from 1950 to the present.[38] They found that in 1979, the latest year for which final figures are available, suicide was the tenth leading cause of death in the United States, ranking ahead of homicide. In 1979, there were 27,206 reported suicides, or 75 per day, throughout the country.

Ahlburg and Schapiro found that the current unemployment level has led to a significantly higher number of suicides than would otherwise have taken place.[39] In fact, the most recent estimates from the National Center for Health Statistics show a thirteen-percent increase in the suicide rate from April through June of 1982, compared to the same three-month period in 1981.[40]

The two investigators discovered that over the postwar period, a consistent positive relationship existed between unemployment for men and their suicide rates. An annual unemployment rate of 10 percent will lead to 1,280 more suicides this year than would have occurred with an annual unemployment rate of 6 percent, they report. While a decision to take one's life may be precipitated by a loss of self-identity, these researchers conclude that men, particularly middle-aged men, have a strong identification with their jobs. Job loss leads to feelings of personal failure and inability to carry out traditional role responsibilities. They find no connection between suicide and unemployment for women.

Schapiro and Ahlburg conclude that, while suicide is certainly the most extreme reaction to a job loss, it is only one of many indicators of the unmeasured psychological devastation experienced by many who are either unemployed or face the threat of unemployment. Each additional suicide precipitated by job loss represents a fraction of the people who are adversely affected by their situations.[41]

Unemployment also has been suspected of having an impact on the mental health of those affected as well as on their use of alcohol and drugs. In Louisiana, during fiscal year 1983, nearly 31,000 persons were admitted to mental health centers or treated in substance abuse clinics. Some $118.2 million was spent for these two programs alone, an increase of 42 percent from fiscal years 1980 to 1983.[42] How much of this is attributable to unemployment is not known, but the statistics suggest a connection.

Other Effects of Unemployment

Joblessness also can have serious effects on physical health and family relationships. For example, an overwhelming majority of the unemployed in one study related periods of serious physical or emotional strain, in such areas as high blood pressure, alcoholism, increased smoking, insomia, and neurasthenia. Worry and anxiety were among the more commonly-reported forms of strain.

Compounding the serious effects on health is the fact that more than 10 million unemployed persons and their dependents have lost their health insurance benefits.[44] The effects of unemployment, particularly prolonged unemployment, on family relationships are devastating. Drs. Paula Rayman of Brandeis University and Ramsay Liem of Boston College have found that when a man has been unemployed for one year or more, it leads to permanent strains on the marriage in nine out of ten cases, culminating in separation and divorce three times more than in other families.[45]

Unemployment of a parent also can lead to stress in children, and is manifested in terms of new problems at school, moodiness at home, and strained relationships with peers. "Besides these more immediate kinds of effects, there is also the question of the effect of a family history of job loss on a child's view of the world of work when parents are unemployed, what happens to a child's sense of the place of work in his or her life as a source of basic material security,a primary mode of self-expression...and as a vehicle of interrelatedness to others," Rayman and Liem point out.[46]

A Suggested Plan of Action

Unemployment not only has long-term effects on individuals and their families, it also has a disastrous effect on the economy, and on the stability of the entire community.[47] Strangely, there is virtually a complete lack of attention and creative programs to help deal with unemployment and the serious problems it produces.

While there is at least one program in every community for addressing most major social problems, there is a dearth of support for dealing with today's most widespread social disaster. Unemployment affects nearly one out of every four Louisiana households. Although a civilized nation, Americans still react to the unemployed as though they were responsible for their own joblessness. Not only is unemployment the most widespread and most ignored community problem throughout the United States, we have seen it is a fundamental cause of many other social problems, as well.

Drs. Schapiro and Ahlburg believe, based on their research, that our elected government representatives, laying plans for an economy that depends in the short-run on high unemployment, have a strong responsibility to consider likely human losses as well as economic gains. They conclude,

> "Those who speak of squeezing out inflation and of living with the short-run effects should be aware that the total costs of such a policy go far beyond the more visible economic consequences of fewer jobs and lower production...government and industry need to take a fresh look at funding for human services programs...(which) have been among the few places for people to turn when undergoing extreme financial and psychological pressure... but the clear message from government is that such services are too expensive. If such services were thought of as a necessary part of planning for an economy with high unemployment, though, it would be clear they are not too costly."[48]

Brenner estimated these costs nationally have amounted to more than $6 trillion over the following six years, alone.[49]

Conclusions

The responsibility for preventing and resolving the problems of unemployment does not rest entirely with government. We need to view unemployment from a total community perspective as a pervasive social sickness.

First, an *early warning system* is needed to anticipate unemployment; a system designed to alert governmental and social agencies in advance of impending layoffs by major employers. Government and the private sector should cooperate in developing such data as determining what the duration of such employment is likely to be; what job skills unemployed workers will have; what other industries in the state and nation might utilize those skills; what company and local, state, and federal benefits will be available; and what community human service agencies can do to meet the other psychological pressures that will inevitably result from this unemployment.

Company-sponsored support programs for workers who are about to be laid off might help convey the message that layoffs are the results of poor economic conditions, not the result of an individual's job performance. Furthermore, companies should offer unemployment readjustment programs for laid-off workers and their families, providing such basic information as what company benefits, if any, the employee will still be entitled to receive, and what human services are available in the community for which they are eligible. Costs of unemployment insurance to the employer sometimes might be significantly reduced if federal law could be amended to provide a possibility of a company cooperating with the state Job Service to help pay the relocation costs of laid-off workers willing to move to other locales to work.

Another service that companies should provide is the continuation of employee health insurance benefits for a given period. Unemployed persons express considerable anxiety about the loss of medical benefits during periods of unemployment, at the same time that unemployment is leading to a much higher incidence of stress-related illnesses. This issue is of such fundamental importance that states should introduce legislation requiring companies laying off workers to continue such health insurance coverages for laid-off workers for at least a six-month period.

A new bill recently introduced in Congress, **H.R. 2847,** the *National Employment Priorities Act*, would lay down extensive rules for plant closings and permanent layoffs, including **advance notice, $600 per employee for job search, reasonable expenses for moving to a new job, educational assistance payment of eighty-five percent of salary for one year, payment of employee benefits for one year, special payment for employees between fifty-three and sixty-one years of age, and continuation of health insurance coverage.**[50]

The bill was introduced by William Ford (D-MI). It has some sixty-five co-sponsors in the House of Representatives. Under its terms, **H.R. 2847** would require companies to develop retraining plans, and government to provide assistance to affected firms through loans, loan guarantees, and research grants.

This important and long-overdue legislation could be of considerable value in any future recession, yet it was not enacted by Congress this year. If supplemented by state efforts, it might have greatly ameliorated the impact of future recessions and their destructive consequences for families and communities.

The Louisiana Job Service, furthermore, should develop a more proactive and comprehensive stance in respect to future recessions, and should greatly expand its programs of job counseling and retraining, and assist in payment of moving costs for unemployed workers and their families to areas both within and outside the state, when jobs already have been secured.

Unions have a vital, and heretofore neglected, role. Much greater attention should be focused in future labor negotiations on policies which produce greater job stability and security rather than momentary wage gains. Unions should press for company programs aimed at helping unemployed workers and their families cope with the financial and psychological ravages of unemployment and for programs to retrain workers.

Not only do government, industry and unions have a responsibility, but so do institutions of higher learning. Much more research is needed to direct efforts for interventions that can soften the impact of unemployment. As Drs. Liem and Raymen note:

> "We know very little about what kinds of coping strategies, informal supports, and formal services are best suited to different circumstances. For example, women and minorities shoulder vastly disproportionate shares of this nation's joblessness, and yet we know the least about their encounters with unemployment...research programs also demonstrate the need for further research on the short and long-term effects of unemployment on children."[51]

Institutions of higher learning throughout the state also should offer carefully planned workshops designed to help workers update employable skills and, if necessary, retrain unemployed persons. They should develop outreach programs aimed at helping unemployed persons and their families identify other income earning resources, how to effectively reduce expenses, more efficiently manage severly restricted personal resources, and provide programs to deal with the tremendous financial and psychological pressures and stresses that accompany unemployment, to name just a few badly needed efforts.

Both the public and private sectors have been remarkably unresponsive to this—our most pervasive social problem. The nation learned valuable lessons as a result of the depression of the 1930s. The Federal Reserve System was created and a number of other reforms were intitiated to prevent such a severe economic disaster from ever happening again. If we do not learn from our current derpession and fail to undertake the comprehensive planning necessary to deal with the economic and psychological impact of unemployment, the problems described in this article will surely reoccur. **The ravages of unemployment on family and community life are of such a magnitude that nothing less than a major comprehensive financial disaster plan of a scope comparable to civil disaster plans is necessary to deal with the problem.**

The costs of such a total commitment may seem large at a time when so much attention is being given to dismantling human service programs, but the costs of such a comprehensive program are miniscule when compared to the inevitable and staggering price resulting from increased crime, higher prison incarcerations, drug and alcohol abuse, spousal and child abuse, infant mortality, destroyed marriages, and families, suicides, mental and physical illness, and the other dire side effects of extended unemployment.

FRED E. WADDELL is a family economist in LSU's School of Home Economics, where he teaches courses in family finance and family financial counseling.

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COLLEGE HIGHLIGHTS

Associate Deans Named

Two acting associate deans have been named for the College, announced Acting Dean James A. Richardson. William W. Williams, associate professor of quantitative business analysis, and William R. Lane, associate professor of finance, assumed the duties of former Associate Dean Lamar B. Jones. Williams heads the Office of Graduate Studies, and Lane handles Undergraduate Studies and Administration.

The division of responsibilities came about through a desire to develop more responsive administration of the College, said Lane, adding, "Dr. Williams and I are enthusiastic about our new responsibilities, and are pleased with the assistance we have been given in facilitating the transition."

Williams said he is devoting substantial time to studying proposals for improving the MBA program by creating various subprograms for different categories of students. The MBA program currently is a mixture of full- and part-time students having individual schedules. The possibility of formally splitting these groups in order to provide a traditional study format for full-time students is under consideration, Williams stated. He said a non-traditional MBA program for experienced executives also is being considered as a means of further serving the business community.

Lane, an eight-year faculty member, previously has served on a number of College committees dealing with curriculum and courses, and is chairman of the Faculty-Senate Committee on Admissions, Standards, and Honors. He received his Ph.D. from the University of North Carolina.

A faculty member since 1979, Williams earned his doctorate at Pennsylvania State University. He worked closely with Jones on the evaluation of the College's doctoral programs, and has participated in an evaluation of the MBA program. He chaired the Ph.D. Admissions Committee for 1982-83.

Undergraduate Enrollment Down

Fall College graduate and undergraduate enrollment showed a decline from the previous year, according to acting associate deans **William R. Lane** and **William W. Williams.** Demand for courses in all areas of business continued to be very high, however, due in part to the enrollment of large numbers of non-majors. Moreover, some 500 sections of business courses are being taught this fall. Total undergraduate enrollment is 2,706, down by 148 from 1982; while graduate enrollment declined from 614 in the fall of 1982, to 598 this year, the associate deans reported.

Most College disciplines showed small declines. Some areas of study, such as petroleum land management, showed decreases reflecting market changes. Quantitative business analysis and general business were the only areas of study to show undergraduate enrollment increases, according to Lane.

A substantial number of Ph.D. candidates were graduated last spring, and this factor, combined with that of higher admissions standards for incoming doctoral candidates, contributed to the lower fall enrollment, according to Williams. The masters of business administration, economics, and quantitative business analysis enrollments increased, while all other College graduate programs declined, he said.

Honors & Papers

Ronald F. Bush, professor of marketing, has been selected Favorite Professor *by* the *LSU Mortar Board*. He also recently was elected vice-president of research and publications for the *Southern Marketing Association*. **S. Michael Carlson** recently has been appointed assistant professor in the Department of Marketing. **Courtland M. Chaney,** a specialist in personnel and human resource management and organizational behavior, has been named to the faculty of the Department of Management. **Herman E. Daly,** professor of economics, has returned from Brazil, where he taught for the summer on a *Senior Fullbright Lectureship*. **Thomas L. Dick-**

ens, assistant professor of accounting, has been nominated for membership in the American Accounting Association New Faculty Consortium.

David B. Johnson, professor of economics and chairman of the Division of Research and Development, has been named to the Governor's Advisory Commission on Economic Development. Johnson also has been invited to present a paper at the third International Conference on System Science in Health Care, July 1984, at Munich, by the World Health Organization. The title of his paper is *"An Economic Analysis of Blood Procurement Institutions."* **Deborah J. Kemp,** assistant professor of finance, has been admitted to the Louisiana Bar Association. **David J. Molina,** research economist for the Division of Research and Development, will present a paper with **R. L. Baumann** and **Daniel Slottye** at the joint meeting of the American Economic Association and Econometric Society, Dec. 28-30, in San Francisco. The paper is entitled *"Variable Consumer Preferences, Economic Inequality, and Cost-of-Living."*

Jeffrey L. Ringuest, assistant professor of quantitative business analysis, will present the following papers this fall: *"The Application of Response Surface Techniques to the Vector Maximization Problem,"* with **T. R. Gulledge Jr.** at the Operations Research Society of America's Institute for Management Science Joint National Meeting at Orlando, Nov. 7-9; and "A Statistical Framework for the Multitrait-Multimethod *Procedure,"* with **Larry G. Singleton,** instructor of accounting, and *"The Vector Maximization Problem: An Interactive Complex Search Approach,"* with **Thomas R. Gulledge Jr.,** assistant professor of quantitative business analysis, at the American Institute for Decision Sciences national meeting at San Antonio, Nov. 21-23. **Mark Smith** was recently made an assistant professor in the Department of Management.

Jerry E. Trapnell, associate professor of accounting, was recently honored by Beta Alpha Psi, national honorary and professional accounting fraternity, as an *Outstanding Faculty Vice President*, at the organization's national convention at New Orleans. He has served as faculty vice president of the *LSU* chapter since 1980. The award is made to professors who have, among other things, demonstrated their concern for the scholastic and professional development of students. At the same meeting, the chapter was recognized as a *Superior Chapter*, the fraternity's highest award, and the sixth consecutive year the chapter has been so designated. **Alan J. Winters,** professor of accounting, has been appointed as the only academic member of the *American Institute of Certified Public Accountants*. The committee sets standards for practicing accountants.

College Research Support

David B. Johnson, has received two $4,900 grants to assist MPA students from the State departments of Commerce and Industry and Natural Resources. The Public Administration Institute project, will allow **Emily Stitch** and **Tim Osbourne** to work half-time with the state agencies during the 1983-84 year, while they complete their MPA studies.

The *Governmental Services Institute* and the *Division of Research and Development* will update and expand the *Occupational Information System* for Louisiana, under an $80,500 grant from the State Department of Labor. The objective of this study is to project the supply and demand for trained manpower in blue collar occupations to 1987.

Charles C. Holbrook of the Economic Development Center, received support from the Louisiana Small Business Development Center Consortium for the project *"LSU SBDC Proposal."* The $76,500 award is part of a grant to a consortium of Louisiana universities to provide statewide technical assistance services to small businesses. The Center also received a six-month, $25,000 continuation of a grant from the Economic Development Administration to continue assisting in the development of the state's economic infrastructure.

(continued on page 28)

COLLEGE HIGHLIGHTS

(continued from page 27)

Robert F. Smith, economics, received funding from the Louisiana Council on Economic Education for his project, "*Economics Education*," which will support the teaching of economics in elementary and secondary schools.

Faculty Publications

Avijit Banerjee, assistant professor of quantitative business analysis, recently had his article, "*An Appreciation of Stockastic Programming in Steel Production*," published in the 1983 special management issue of the *Review of Business and Economic Research*.

Robert Newman, associate professor of economics, has had his book, *Growth in the American South: Changing Regional Employment and Wage Patterns in the 1960s and 1970s*, by New York University Press.

Leila O. Schroder, professor of finance, recently had her article, "*Genetic Engineering: Welcome to the Courts*," published in the *World Medical Journal*, March/April 1983.

C. F. Sirmans; professor of finance and holder of the Chair of Real Estate, recently completed the second edition of his *Real Estate Investment Handbook*, published by Prentice-Hall; and has had recent articles published in the *Journal of Urban Economics*, *and the Federal Home Loan Bank Board Journal*.

Glenn E. Summers, assistant professor of accounting, has recently co-authored a monograph, "*Developing the Internal Auditor's Leadership Skills*," with **Paul F. Carson,** United States Department of Defense, and **Steven P. Golen,** professor of business communications, published by the Institute of Internal Auditors, Inc., in June.

Jerry E. Trapnell, associate accounting professor, and **J. David Spiceland,** accounting professor at Memphis State University, had their article, "*The Effect of Market Conditions and Risk Classifications on Market Model Paramenters*," published in the Fall 1983 issue of the *Journal of Financial Research*.

Jerry A. Wallin, *LSU* associate professor of management, and **Kent Curran,** associate professor of management at Memphis State University, recently co-authored "*A Field Investigation of Leadership in Three Public Sector Agencies*," published in the *Proceedings of the Fifteenth Annual American Institute for Decision Sciences*, to be held at San Antonio in November.

James W. Wansley, assistant professor of finance, co-authored with **Rodney L. Roenfeldt;** and **Philip L. Cooley;** professors of finance at the University of South Carolina, "*Abnormal Returns from Merger Profiles*," in the June 1983 *Journal of Financial and Quantitative Analysis*. ■

NATIONAL NEWS

(continued from page 16)

Although marketing strategy predominates as the planning challenge of the 1980s, cost control remained high on the list of present corporate concerns.

Competition Gaining on IRAs

Deferred compensation plans are challenging Individual Retirement Accounts as the most popular tax-deferral pension plan, according to a Federal Reserve Bank of Atlanta study. The new plans are gaining rapidly on IRAs because of their greater return on investment, greater liquidity, and higher allowable contribution.

The bank's researchers say that, although IRA investment has reached $19 million compared to $15.3 million for deferred compensation plans, trends indicate that deferred compensation plans will soon attract a much greater portion of voluntary-contribution, tax-deferred retirement investment.

U.S. Exchange Rates Are Up

The United States' exchange rates with its major trading partners have risen dramatically since 1980, according the Federal Reserve Bank of St. Louis. There are two reasons for this.

First, increases in real interest rate differentials, other things being equal, cause currencies to appreciate. Even though nominal interest rate differentials have declined because of the marked slowing in domestic inflation, real interest rate differentials have increased strongly in favor of the United

States. Consequently, exchange rates have risen to reflect the increase in attractiveness of dollar-denominated assets.

Second, exchange rates reflect market expectations of long-term policies. The bank interprets the dramatic decline in the U.S. inflation rate, relative to that in other countries, as the result of a shift in U.S. policy that has increased the desirability of dollar holdings.

Construction Cost Rise

The cost of constructing commercial and residential buildings in the United States climbed dramatically in the second quarter of 1983, according to a report by Marshall & Swift. The quarterly increase was the largest such rise in almost two years, the firm reported.

The national average for the rate of inflation for the first six months of 1983 was 2.9 percent—one-tenth higher than the rate of inflation for the full twelve months of 1982. Residential construction costs increased much faster than the commercial sector, due to the accelerating cost of lumber, which has increased as much as 20 percent in some cities since January.

Other major material components remained mixed, with ready-mix cement up slightly and steel down, with heavy discounting continuing. Labor was up an average of 3.5 percent for the first half, with most of that increase coming in the second quarter. ■

LOUISIANA BULLETIN

(continued from page 17)

opened a major territorial office at Baton Rouge this fall. The new district is part of the largest franchise sale ever recorded by the company, serving a sales territory of 9 million people.

Gucci Opens in New Orleans

Gucci, the international fashion specialty store known for its finely crafted leather goods, has opened as the anchor store in Canal Place. It will be joined by seventy-five prestige retail, specialty and gourmet establishments in the glass-enclosed fashion center. The $500 million office-shopping-residential complex is located at the foot of Canal Street.

All-Business Phone Directory

The 1984 edition of the *Commercial and Industrial Yellow Pages*, being delivered in November, is a comprehensive source for locating products and business services of all kinds throughout South Louisiana. Introduced last year to serve as an aid for the growing area business community, the directory lists some 3,400 wholesalers, manufacturers, distributors, fabricators and business services. ■

RESEARCH NOTES

(continued from page 5)

of the technical occupations should decline in a year or two beyond 1985. In certain cases, the difference between demand and supply should be interpreted with caution. For example, the data shows the demand for managers, far exceeds the projection of trained manpower in that occupation. Many of the managerial openings may be filled by persons without formal training in management.

Baton Rouge is expected to have shortages, including a slightly higher demand for accountants, medical and dental technologists, physical therapists, and some engineering technologies. The shortages could be filled by the surpluses in other parts of the state.

The projections for Shreveport generally follow the statewide trend. The exceptions are for elementary school teachers, where a surplus is expected, and for pharmacists and electrical engineering and other engineering technologists, where shortages are expected. The shortfalls can be made up out of surpluses from elsewhere in the state. ■

Larry R. Smeltzer

Quality Circles – A Viable Productivity

Recent available evidence apparently indicates quality circle programs can result in increased productivity, whether at the Uniroyal Chemical Division at Geismar, or in the Louisiana Department of Revenue at Baton Rouge; and yet, if increased productivity is a reasonable expectation, why do so many circles fail? Is the quality circle movement simply another fad in the many attempts to improve productivity, or is it a viable strategy?

A recent article in the *Wall Street Journal* reports nearly 50 percent of the companies questioned in a survey were using some form of the Quality Circle (QC) to improve productivity.[1] The International Association of Quality Circles (*IAQC*) reveals that approximately 40 percent of those corporations listed on the New York Securities Exchange (*NYSE*) have instituted QC strategies involving an estimated 575,000 employees.[2] QCs are equally popular in Louisiana, where such large operations as Martin-Mariatta of New Orleans, and smaller ones like National Food at Harahan, are crediting success to this concept.

Numerous failures, however, also can be cited. Just as manufacturing, chemical and service industries have been successful with QCs, instances can be shown where each of these industries has failed with the technique. Studies indicate only about 25 percent of QCs produce measurable results greater than their costs, and only 40 percent of the circles implemented last longer than one year.[3]

Quality Circles Described

The director of QCs at Martin-Mariatta, Phillip C. Thompson, describes the technique as being a small group of employees and their supervisor, who voluntarily meet on a regular basis,

- to study quality control and productivity improvement techniques;
- to apply these techniques in identifying and solving work-related problems;
- to present their solutions to management for approval; and,
- to monitor the implementation of these solutions.[4]

Training and support for QC teams is carried out by a facilitator (or coordinator). This full-time person usually reports to a high-level executive officer, such as a plant, division, or manufacturing manager. His role includes designing the program and training materials, introducing the concept to potential circle members, training, coordinating among the circles and other departments, coaching circles, and keeping a steering committee informed of QC activities. The steering committee is composed of representatives from groups affected by circle actions, who oversee the entire process.

QC History and Status

QC programs stem from Japanese management techniques developed over the past twenty years, but which initially were based on American social science theories. Unlike schemes tried previously in this country—such as the Zero Defects movement, which relied on individual workers—QCs are based on work groups.

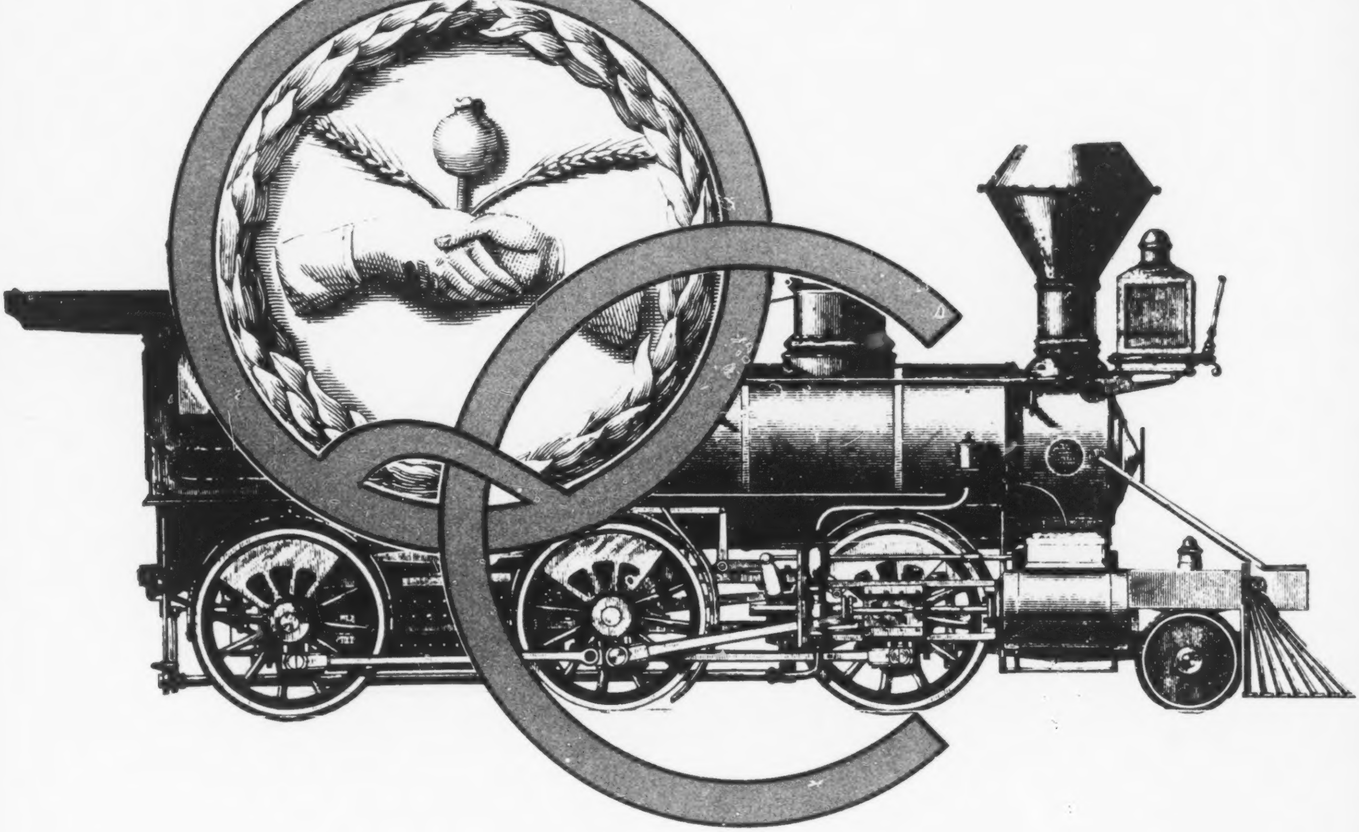
Initially introduced to Japan shortly after World War II, QCs prospered because that nation realized its only significant resource was its people. Since Japan has a living area three times greater than Louisiana's, but twenty-seven times the number of people, its leaders quickly realized national prosperity depended upon maximization of human resources. Present estimates indicate more than 25 million employees—about one-half of the Japanese workforce—are involved in QCs.[5]

The process was reintroduced into the United States in the early 1970s. The first American firms to successfully use QCs were high-technology aerospace companies that had previously observed them in action through extensive contact with Japanese manufacturers. Word of the new management technique spread rapidly.

Success Stories

Today, such corporate names familiar to Louisianians as Ciba-Geigy, General Motors, Martin-Mariatta, Uniroyal Chemical, Monsanto, Stauffer Chemical, and Exxon lend credibility to the QC concept. A favorable climate of public opinion has developed in regard to QCs. Numerous success stories have been cited, such as a documented savings of $2.8 million for Lockheed Aircraft, attributable to QC practice during a two-year period.[6]

Honeywell Corporation is said to have reduced costs associated with one of its assembly shops by 46 per-



cent over a two-year period, after QCs had been implemented in the shop; and also claims a similar $86,430 savings during a nine-month period in one of its hybrid microelectronics laboratories.[7] Martin-Marietta Corporation's Michoud Division reported their QC program lowered the rate of defects per person from .49 for the six-month period prior to joining to .20 for the six-month period after.[8]

These success stories have caused a number of executives to consider QCs for their companies. Generally speaking, however, top management seldom receives accurate appraisals of potential problems from publicity releases and press reports to help them decide if their firms are ready for the QC approach. The body of knowledge about QCs, in fact, is neither well organized nor easily disseminated. One of the reasons may be the rapid growth of the QC concept has resulted in an incomplete documentation of the process.

Although many local chapters of the *IAQC* recently have been formed (Louisiana has chapters in New Orleans and Baton Rouge), this rapid growth generally has occurred without the benefit of shared experience. Another factor is that research on the QC process is virtually non-existant. This is partly because the concept developed outside of the academic realm, and its participants have been, by and large, persons having a limited interest in such research.[9]

Experts are at work developing a body of knowledge to summarize the factors which must be considered for successful implementation of the QC concept. Comparisions of QC efforts make it possible to develop a list of factors which differentiate between successful and unsuccessful QCs as a productivity improvement strategy. This study will result in the identification of certain prerequisites for success.

Not a Panacea

QCs must be viewed within a context of participative work structures which have been evolving throughout the United States and the rest of the world over the last two decades. The circle concept is not meant to be a quick solution, and companies using this strategy as a simplistic short-term solution to production problems will accomplish little. It is intended to play a part in a more comprehensive plan for improving an organizations' products or services.

A research paper on United States and worldwide variations of "direct participation of employees in everyday decision making processes on the shop or office floor" was published by the Center for Research on Social Organizations in February 1981. Highlights of the paper's finding indicate the following:

(1) Worker participation in management implies a partial decentralization of decision making—a call for workers once again to become involved in decision making over which labor ceased to exert control at some time during the transition from crafts to industrial organizations;

(2) There were extensive discussions during the early 1970s, among American academic and government circles, regarding the need to *humanize* work and raise the quality of work life for workers—advocates arguing that new work structures should be designed to allow employees to control those aspects of their jobs most directly affecting their everyday lives; and

(3) Major institutional actions (i.e, unions, management, and government) have not strongly supported innovation in this area, despite considerable thinking and writing on the subject.[10]

If an organization is not properly disposed to worker participation, the QC process is destined for failure. Other participative techniques, such as *management-by-objective*, have failed in certain situations because the correct environment was not present. An organizational analysis, therefore, always must be conducted first to determine readiness.

Key Elements

There are seven key organizational elements which differentiate between those organizations ready to move with QCs, and those which require remedial steps to be taken first. These elements should be *audited*. That is, each element should be reviewed and then considered by top managers contemplating QCs in order to develop a comprehensive picture of organizational readiness.

Degree of Management Support. The importance of top management support is probably the most often cited prerequisite for successful QCs. One of the first on-site research projects funded by the *IAQC* cites lack of support by management as the number one problem faced in QC projects.[12]

What is meant by "support", however, must be looked at closely. There are a number of support indicators which can be considered. Support means: receptivity to the circle concept, not only when it is described as a *productivity improvement* approach, but also when the words *worker involvement/participation* are used; a willingness to allow someone to research QCs; agreeing to a pilot program after hearing that it might not show a return on investment for several years, if at all; showing visibie support by publicly endorsing the program; showing active interest in circle progress; demonstrating a willingness to commit a substantial amount of funds to assure all levels are adequately trained or briefed on QCs; and communicating support of the program to senior and middle managers. When these indicators of support are lacking, QC efforts are doomed from the beginning.

Communication Clarity. This is the second factor which differentiates between successful and unsuccessful programs. For many organizations, successfully implementing QCs will require a different kind of thinking about communication. Circles are introduced most easily where communications have been open, where management has been willing to listen to employees and try out ideas, and where there is a high degree of clarity about expectations.

Since circles tend to force two-way communications (i.e., ideas are communicated up, as well as down) it is important to look at the current vertical pattern of communication in order to project how great a change circles might create. QCs cause a unique situation in that messages are originated at lower levels of an organization and sent upward. Circle proposals sent upward must receive timely replies from top management, so the upper levels must be ready to respond. Companies with successful QC programs usually stipulate that management must at least tentatively respond to proposals within seventy-two hours. If this creates resistance from middle and upper management, circle members soon lose enthusiasm.

Management Style. This third element addresses management's personal style and how compatible the current style is with the *letting go* and participatory approach of circles. Separate analysis is required for each management level, as well as for any individual managers whose personal styles stand out in some way. The accessability of one level of management to other levels, and how much top management has an *open door* to lower levels must also be viewed. It is necessary to consider how that level of management would react to the issue of circle freedom and operate in its own way, after selecting its own problems.

Managers accustomed to operating in a bureaucracy, in which authority is rigidly based, may have difficulty accepting the QC concept. Each level of management in a bureaucracy has very specific and unquestioned areas of authority. Suggestions initiated by QC groups may subtly question the manager's traditional domain. Managers must be flexible enough to accept input from subordinates.

Organizational Culture. Two major elements need to be considered here. First, how does planning and decision making take place; and, second, how has the organization responded to change in the past.

Decision making is an integral element of the QC process. If decision making is highly centralized and employees are not accustomed to making them, QC success is unlikely. The type of decision also must be considered. Administrative decisions are traditionally more likely to be implemented when made at the top, but technological decisions are more effective when made and implemented from the bottom.[12] To predict circle success an organizational analysis should indicate where decisions are made, and determine if QC teams can be formed accordingly.

Organizations respond to three kinds of change: administrative, technical, and product. Each of these may have received different levels of acceptance in the past, and offer an indication of how QCs will be accepted. It is always best to begin in an area with a high probability of success. For instance, if administrative changes have met strong resistance in the past, initial QC efforts should emphasize technological changes.

Structure. The way the organization is set up and the nature of interdepartmental relations also are related to success of QC efforts. Various organizational structures facilitate the circle process in different ways. Organizations making frequent use of project teams or task forces will find it relatively easy to assimilate the process, while an inflexible, heavily regulated structures are more likely to inhibit technological change.[13]

Matrix organizations, which result from a need for high interdependence and adaption to uncertainty, make frequent use of teams. Employees in these organizations are accustomed to changing roles and are often more flexible. QCs can be more quickly assimilated in this type of organization than one which is more bureaucratic and heavily reliant on traditional roles.

Structure also affects the manner in which teams should be formed, and must be considered when developing circle teams and determining the types of problems they should analyze. A functional organization (a structure in which employees who do similar jobs are grouped together) encourages employees with similar tasks to be on the same team. The product organization, in which all necessary resources (such as manufacturing, research and development, and marketing for each product) are contained within a unit, encourages employees with dissimilar tasks to be on the same team.

Finally, relations between departments must be considered. A problem being analyzed by a QC team may require that a nonmember of the team become involved. For instance, if a group made up of employees from the safety department is analyzing the problem of a high accident rate, a representative from the industrial engineering department may be needed. This should present no problem, unless the involved departments have never worked together before or have developed an antagonistic relationship. Horizontal channels of communication between departments must be well developed.

Labor Relations. In organizations with unions, past and current union status is a factor in the success of QCs. Negative union relations during the past—whether there have been stikes, walkouts, or negotiations that have undergone arbitration—can adversely affect QCs. It is probably advisable that a union representative be consulted throughout the planning and installation process, and a union representative be placed on the QC steering committee.

Some controversy does seem to exist, however, as to whether it is best to promote QCs through the labor contract. Several authors specifically warn against either management or union attempts to promote circles through the labor contract, because QCs will likely become a bargaining point which may undermine the cooperative effort required in the process.[14]

Zachary B. Fasman, on the other hand, suggests the installation of QCs into a unionized plant may constitute an issue for which NLRB regulations and legal jurisprudence establish a duty to bargain. Furthermore, he suggests various problems which might accrue from such a duty to bargain, including:

(1) The possibility of extensive requirements by employers instituting QCs;

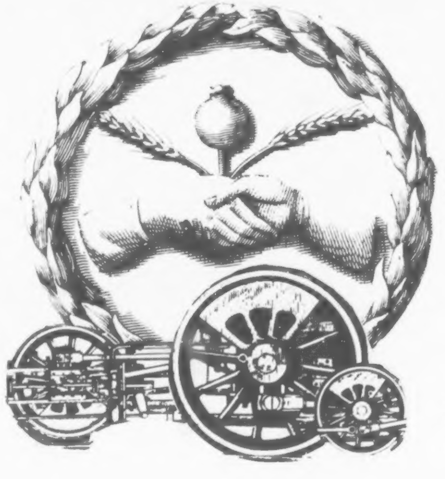
(2) A likelihood of conversion of unionized employees into exempt managerial personnel upon QC installation; and

(3) Problems arising out of the union's duty for fair representation from a difficulty in determining who acts as supervisory personnel, and who acts as labor representatives within the QC.[15]

Furthermore, in those organizations which are not unionized, special care also must be taken to avoid legal difficulties. Specifically, if the scope of acceptable QC subject areas is not restricted to exclude such issues as grievances and employee wages and benefits, the employer organization may submit itself to possible violation of the National Labor Relations Act. The complicated legal nature of such issues warrants the acquisition of legal counsel when considering any productivity improvement program such as QCs.

Employee Training. Employee skills are a major differentiating factor between successful and unsuccessful quality circle programs. New and additional employee skills often are required to implement QCs. Training on the basic skills of communication, decision analysis, group problem solving, and reporting techniques are required. However, training on the specific quality circles processes are also necessary.

Various authorities recommend that a minimum of twenty to twenty-eight hours of training be required to assure the participants have the appropriate skills.[16] An additional six to eight hours is necessary to expose them to the philosophy of the circle and the specific procedures that should be implemented.[17] More training is required for facilitators because of the key role they play in the process. Training programs for facilitators by the American Productivity Center or the IAQC usually lasts five days.



The most important aspect about training for QCs is that standard training programs are often either too brief or improper for the people who later plan to solve complicated problems. An added benefit is that appropriate training will increase the abilities of employees in areas other than QC endeavors.

Conclusion

Quality Circles are gaining popularity as a strategy for improving productivity; however, not all organizations are ready for this strategy, so an unnecessarily high failure rate exists. A number of factors differentiate between successful and unsuccessful programs; an audit of seven critical factors mentioned here can determine an organization's state of readiness for QCs.

Since an entire complex of factors must be in a state of readiness so that different degrees of preparation will be required, few organizations are going to be completely prepared to experience immediate success. The Quality Circle is not a process that simply can be turned over to a project director or a group of consultants, but, with appropriate preparation, and a state of readiness, improved productivity is a reasonable expectation when QCs are implemented.

LARRY R. Smeltzer is an assistant professor of business communications and office systems at LSU. ■

Endnotes

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[12] Richard D. Daft, **Organization Theory and Design,** (St. Paul: West Publishing Co., 1983), p. 260.

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[15] Zachary D. Fasman, ' '*Legal Obstacles to Alternative Work-Force Designs,*' ' **Employee Relations Law Journal,** (Autumn, 1982), pp. 256-281.

[16] Thompson, pp. 55-56.

[17] Sud Ingle, ' '*Avoiding Quality Circle Failures,*' ' **Transactions,** (Memphis: IAQC, 1983), p. 119.

IN APPRECIATION

The **Louisiana Business Review**, a quarterly publication of the Division of Research in the College of Business Administration at Louisiana State University, is dedicated to providing worthwhile and timely information on local, state and national economic developments of interest to members of the Louisiana business and government communities. This objective is being achieved by presenting high quality, readable articles written by knowledgeable representatives from business, government and academia. The Division would like to express its sincere appreciation to the following companies whose valuable contributions have made this publication possible.

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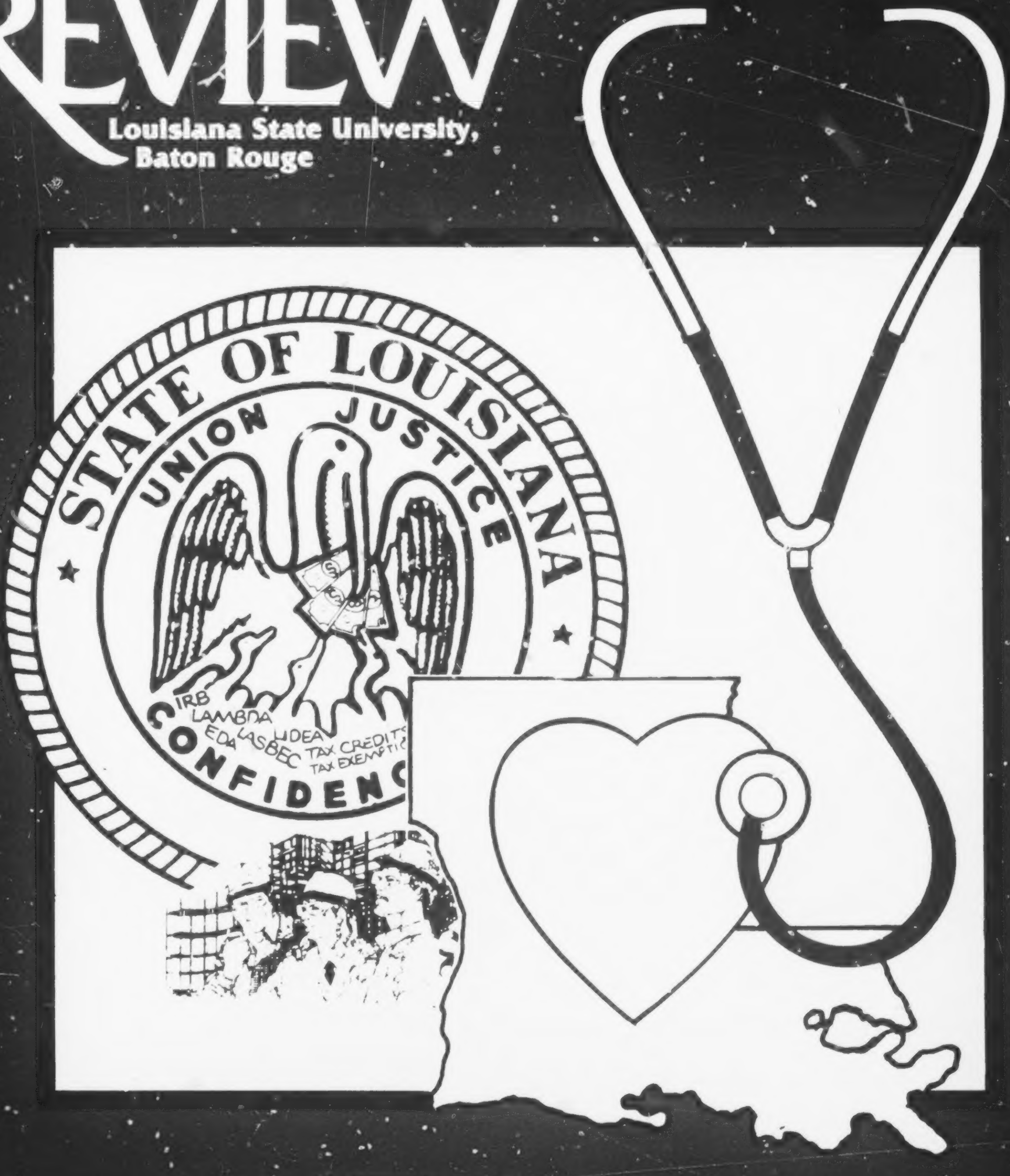
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Industrial Development

LETTER FROM THE EDITORIAL BOARD

Competition is alive and healthy in the United States. Not only is there competition among individuals and firms, but there is also strong competition among states and localities for the investor's dollar. Although states competed with each other in attracting business and industry for many years, the past recession and the recent experience of the *rust-bowl* states have exacerbated this competition.

States are introducing new incentive programs and packages and providing free information access. Towns as small as 50,000 to 100,000-population are sending delegations on national and international hunts to bag new firms. The collective results are largely self-cancelling, but it is clear that most states or cities which do not participate in the business-recruiting game will fall behind in economic development.

Louisiana has been an active participant in economic development for many years. Such activities, however, are going to play a more important role in the future. While Louisiana is recovering from the past recession, it is trailing most other states in the recovery, and certain long term economic problems in Louisiana are becoming increasingly evident.

This issue of the **Louisiana Business Review** contains three articles that deal with economic development. The purpose of these articles is not to present definitive research results but to present a general overview of the economic problems and prospects of the state, a broad set of economic development principles, and a survey of the types of assistance available. We hope to publish more specific research articles in some future issues.

In the first article, David B. Johnson describes the sources of the economic problems confronting the state, including a lagged recovery from the recession; a low oil price; constraints on refining and petrochemical growth, such as decreased international demand; fewer oil imports; and the effects of increasing prices of electricity. The second half of the article is devoted to a discussion of some basic principles of economic development.

The second article, written by Paul Adams, Pamela Davidson, John Duffy Jr., and David J. Molina, entitled *Financial Assistance in Louisiana*, presents information on the most important financial and technical assistance programs available to firms in Louisiana. It provides a good overview of the available incentive programs and contains the initial information needed by those small businesses interested in obtaining financial and technical assistance.

A comparison of the economic performance among Louisiana, the nation, and neighboring states Alabama, Arkansas, Mississippi and Texas is presented in the third article, written by A.M.M. Jamal and David J. Molina. Not surprisingly, the economies of Texas and Louisiana had similar economic growth patterns during the 1970s, and both states had economic growth rates above the national average.

Although Texas has suffered from the drop in oil prices and from some of the same problems as those confronting Louisiana's refining and petro-chemical companies, its economy has a much broader base. The Texas January unemployment rate of 7 percent was below the national average, whereas Louisiana's unemployment rate of 10 percent was above the national rate.

Finally, in the *FORUM* section we are pleased to present to our readers *Control of Strategic Goods and Technology*, by Randall M. Evanson. Evanson discusses some of the issues involved in the trade between the East and West. Specifically, he examines the pros and cons of allowing the Soviets access to U.S. industrial technology. Though no clear answer is given, for one may not exist, the article does deliniate some of the major issues involved in providing the Soviets with American *know-how*.

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The Editorial Board invites the submission of manuscripts to be considered for publication in this quarterly. Style sheets for manuscripts and manuscipt abstracts are available upon request. Comments and suggestions on any material appearing in the **LBR** are also welcome.

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BOOK CORNER

The MEED Middle East Financial Directory 1983, (London: Middle East Economic Digest Limited, 1983): 307 pp.: $75.00, cloth.

This reference book provides a ready reference of financial institutions twenty-four Middle Eastern countries. The listings for each country inc information related to the central banking authority, commercial banks, specialized banks, and various other categories. Next follows a listing seventy-five other countries, citing head offices of non-Middle-Eastern banks and institutions. The information is cross-referenced by indexes corporate members, shareholders, and institutions.

The Editor's Preface points out the information was updated in early December 1982. It also encourages readers to contact the publisher for updated information throughout the year.

—Bruce Miller

Handbook of Accounting Communications by Jeremiah J. Sullivan (Reading, MA: Addison-Wesley Publishing Company, Inc., 1983): 440 pp.: $29.95, cloth.

"The primary functions of accounting are measurement and communication—the getting and giving of information." These words come from the first sentence of the preface, and they describe the importance of the role communications plays in accounting. As a result, the author identifies two specific purposes for, having written the book: "(1) to develop an understanding of the communications behavior of accountants and (2) to build oral and written accounting communications skills."

This handbook provides a comprehensive treatment of the entire scope of accounting communications. The first three chapters deal primarily with communication theory as it relates to the accounting function. Specific applications of theory to various accounting communications are demonstrated in the third chapter. Chapters four through seven concentrate on general writing techniques that can be applied to any written communication.

In chapters nine through eleven, the author illustrates various techniques for writing effective memos, letters, and reports. Examples of various materials demonstrating the techniques being discussed also are included. The remaining chapters deal with oral and interpersonal communications. Making effective oral presentations of accounting reports, interviewing and listening techniques, and communicating in small groups are some of the main topics covered in these chapters.

Each chapter ends with a checklist of questions reinforcing the chapter material. Many examples, exhibits, and models are used throughout the book to illustrate the principles discussed. Because of the author's comprehensive treatment of accounting communications, all individuals in the accounting profession interested in improving their communication ability will find this book beneficial.

—Steven P. Golen

A Manager's Guide to Local Networks by Frank Derfler Jr. and William Stallings (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1983): 152 pages; $14.95, paper.

This book will make good background reading for any manager who hopes to increase office productivity by installing a modern information management system. The authors take very complex terminology and clarify it for the manager who may not have the technical background necessary for establishing a local network to link computers, word processors, and data systems.

The early chapters of the book explain transmission media and network topology. Telephone and video systems are covered as well as the Private Automatic Branch Exchange (PABX), modems, and a discussion on speed of transmission of information. Chapter 4 has drawings to show transmission methods, connections, traffic control, and message addressing for an office network.

Standards developed by the International Standards Organization for the Office Systems Interconnection (OSI) model to connect different brands of equipment are explained. The Systems Network Architecture (SNA) developed by IBM is also discussed.

The criteria for managing a data base, planning an office automation system, and buying a local network are explored. Examples of networks are shown in the appendix. One is a CBX by ROLM (in which IBM has recently acquired an interest). Others are a broadband system by AMDAX Corporation and Ethernet developed by

Xerox along with Digital Equipment Corporation and Intel.

A glossary is included to explain the many abbreviations so commonly used with all of the new technology. Chapter 5 is for those who are technically-minded and explains such terms as *RS-232-C* (Electrical Industries Association standard for interconnection of equipment), *ASCII* (American standard for information exchange, used for coding digital signals), and EBCDIC (Extended Binary-Coded Decimal Interchange Code, used primarily for coding on IBM business systems), all of which are terms used when discussing data transmission. The book is written in a straightforward, easy-to-understand style, and every chapter contains a short summary of things to remember from the chapter.

—M. Agnes Titkemeyer

Revitalizing Downtown Retailing: Trends and Opportunities, U.S. Department of Housing and Urban Development, Office of Community Planning and Development, (Washington, D.C.: USGPO, 1983); 34 pp.

A major development in urban demography in the 1960s and 1970s was the marked decline of established central business districts and the concomitant growth of suburban shopping centers and malls. Renewal of older central business districts has been the object of numerous projects pursued with varying degrees of success during the past few years. There is a paucity of literature to assist those undertaking such projects because revitalization of downtown areas is so recent. To fill this need, the Office of Community Planning and Development and the International Council on Shopping Centers sponsored a conference at Washington, D.C., in the spring of 1983. This study, which was presented to the conference, summarizes various approaches to be taken in developing effective revitalization projects.

Downtown revitalization is described in the study as falling into four categories: downtown shopping malls, specialty or festival retailing, mixed-use projects, and retail street innovations. The authors point out a city contemplating revitalization must decide which of these four categories it wishes to develop based upon a careful assessment of the market, location, consumer attitudes, parking availability, safety, and construction and operating costs. Strategies for implementation, including ways of enhancing cooperation between the public and private sectors, are described in detail.

The study warns downtown revitalization must not be confused with recapturing the past. Unsuccessful revitalization projects apparently failed because planners did not take into account current marketing factors and technological changes. New economic and social preferences offer cities an opportunity to restore and renew a once vital part of the economic life of the community.

Although this is not an exhaustive or comprehensive study, it provides objective, realistic, and cogent guidelines for planners responsible for downtown revitalization. It is a source of sound economic counsel to those contemplating investing in the economic future of downtown business areas.

Deregulating Community Development, by Paul R. Dommel, Michael J. Rich, Leonard S. Rubinowitz, and Associates, (Washington, D.C.: Office of Policy Development and Research, U.S. Department of Housing and Urban Development, 1983); 235 pp.

This report is the final of five studies on the first eight years of the Community Development Bloc Grant program (CDBG). The four previous studies were carried out under the auspices of the Brookings Institute, while this one was compiled by researchers at Cleveland State University. Those interested in community development will find this last study especially important because it examines the impact of deregulation and loosening of federal controls on domestic programs funded by the federal government and administered at the state and local levels.

The Block Grant Program was founded in 1974 to provide federal funds to local governmental units for community programs. Attempts were made under the Carter Administration to limit the descretion of local decision-makers to assure that the pursuit of local goals did not subvert national policies aimed at helping persons from lower social-economic levels. Congress put a 10-percent limit on CDBG funds to be spent by local communities for public services in 1981; this limitation must be fully implemented by 1985. The 1981 legislation also signalled a major shift in HUD policy, permitting greater flexibility for local decison-makers in spending federal funds. These changes were in keeping with the Reagan Administration's goal of deregulation and increased local autonomy.

The Dommel study surveyed ten key cities across the country in order to ascertain the initial effects of the new policies on CDBG programs. The study concludes that "as communities cut social services spending to reach the 10-percent limit, the impact on benefits to low- and moderate-income groups is likely to be adverse," (p. 152). However, the study points out that those who favor greater local autonomy will applaud the 1981 legislation. The high priority given to community-wide programs promises hope in the form of economic growth and the creation of jobs.

The report includes an executive summary, a description of the project design, detailed analyses for each of the sample cities, and the full text of the field analysis instrument used by the authors in accumulating their data.

—M. S. Bolner ■

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David B. Johnson

The Louisiana Economy: Diagnosis and Prescription

Economic development in the state is one of hottest topics in Louisiana political and economic discussions. There have been numerous studies, councils, and commissions dedicated to identifying, analyzing, and explaining the causes and recommending remedies for the state's economic problems. The fundamental cause of this activity is that the state's economy, after experiencing tremendous growth during the decade of the 1970s, is faced with slower growth rates during the years of the 1980s, and an even more tenuous long-term future. This article will address a few of the major causes of Louisiana's stagnating economy and attempt to suggest some solutions.

Louisiana had the second-highest growth rate in per capita income among the fifty states during the 1970s; however, that growth rate has significantly subsided. Louisiana's per capita income growth rate ranked tenth in the nation between 1979 and 1983. It is estimated the state dropped to forty-fifth during 1983. Another indication of its current relative stagnation is Louisiana's unemployment rate of 10.1 percent for December 1983, which compares unfavorably with the national unemployment rate of 8.2 percent. Louisiana's unemployment rate ranks fourth nationally (after West Virginia, Michigan, and Alabama).

Recession and Its Aftermath

The national economy has shown tremendous improvement during the past year following the recent recession. The unemployment rate fell from 10.6 percent in the fourth quarter of 1982 to 8.2 percent in December. Although there are some concerns about the future actions of the Federal Reserve authorities and about the possibility of increased demands for funds by the federal government (to finance the deficit), and by corporations' driving up interest rates (to finance larger inventories and to expand facilities), most economists are predicting continued economic improvement in 1984.

Improvements in the national economy will have a beneficial impact on Louisiana's economy. Because Louisiana's economy produces raw materials (e.g., oil, gas, and forest products) and intermediate bulk materials (e.g., many petrochemical products), rather than finished goods, the Louisiana economy tends to lag in the upturns and downturns of the national business cycle by approximately six to twelve months. When consumer demand increases for automobiles or household durables, for example, the immediate effect is felt in those firms which are producing these finished goods; only later does the increased demand impact the downstream components such as the plastics components industry and, ultimately, the petrochemical companies in Louisiana.

That part of the cause of Louisiana's stagnation which is due to the *lagged effects of the national business cycle is* not *a source of* long-run concern. Although, the state's economy will lag behind the recovery rate of the nation, it eventually will ride on the coattails of an improving national economy. As a result of this *coattail effect* the state's economy has been improving recently, and it will show continued improvement during most of 1984. Unfortunately, the lagged effects of the national business cycle are not the only, or even the

Decline in the Oil Patch

The oil price increases stimulated by the OPEC cartel and by the Iranian revolution during the 1970s provided a tremendous boost to the Louisiana economy. In 1970, the U.S. average wellhead price of a barrel of crude oil was about $3.15; after the strengthening of OPEC cartel and the Arab oil boycott of 1973-74, the oil price rose to $7.50 per barrel and then to $9 in 1977. After the price decontrol and the Iranian oil curtailment in 1979, oil prices increased to $35. Since the price peak in 1979, oil prices have fallen to the $27-$29 range and there is considerable uncertainty about future oil prices.

The oil patch problems are intertwined with two very important factors. First, Louisiana's oil and gas production peaked during the early 1970s, before the significant price increases occurred. Despite the tremendous growth in prices, employment, exploration, and drilling during the 1970s, production actually fell due to the simple fact that Louisiana is an aging field, (i.e., the *easy-to-get* oil and gas have been *gotten* and new fields are harder to locate and more costly to *mine*). Hence, if Louisiana is not to have a precipitous drop in oil patch activities, the real price of oil has to increase constantly over time.

Second, as mentioned above, the real prices of oil and gas have been declining since 1980. According to many experts, these prices are expected to decline even farther due to the continued effects of conservation, slow economic growth in Western Europe, and the needs of developing countries with rich petroleum reserves to finance their growing international trade and

Louisiana
a dream state

financial deficits. However, in this author's opinion—as well as in the opinion of many others—nominal prices are likely to stabilize at about their current level in the short run—-due in part, to the economic recovery of the United States and its increased industrial demand for fuel. Over the next ten to twenty years, the real price of oil and gas is probably going to increase, but, assuming no catastrophic event occurs in the Middle East or other major oil-producing regions of the world, the rate of price increase will be much less than it was during the 1970s.[1]

If this scenario is a correct one, then Louisiana's oil and gas industry will remain a significant industry well into the next century, but it will not be a major source of income or employment. Depending upon future world oil and gas price variations and domestic energy policies, there will be episodic variations in Louisiana's oil patch, but the long-term future of an industry based on a dwindling resource base is quite clear. We need to look elsewhere for employment growth opportunities for Louisiana's citizens and for sources of state revenues.

The Refineries

Petroleum refineries originally located in Louisiana because oil was extracted in the state and the refined products could be shipped out via the Gulf of Mexico or the Mississippi River. More recently, a pipeline network has been developed to transfer products to the midwest and northeast regions of the country. Louisiana citizens and governments also appear to have a tolerance level for refineries located in their state that is much higher than in many other sections of the country. In return, the refineries have provided a substantial number of high-paying jobs for both blue and white collar workers.

Perhaps the most significant contributions of the refineries to the Louisiana economy is the opportunity they provide for the construction and service industries in the state. These latter industries are relatively-labor intensive and their *ripple effects* are felt throughout the state, but particularly in southern Louisiana. The construction industry and a considerable proportion of the related service industry crucially depend not upon a standstill economy, but upon a constantly-growing one. Much of the construction and related service industries in the state depend upon the construction of additional capacity. If this growth rate decreases, as it has recently, the impact is much greater on these industries than it is on the refineries.

Although Louisiana refineries were initially constructed to refine crude oil extracted in Louisiana (or neighboring Texas) fields it became clear in the latter 1960s that this soon would not be possible. Since a refinery-orientated economic infrastructure had been developed here, it appeared to make sense to continue to expand Louisiana's refineries and to replace dwindling crude oil extraction in Louisiana with some increased extraction offshore in the Gulf of Mexico and, primarily, with crude oil imports.

Louisiana extraction of crude oil now constitutes about 50 percent of refinery capacity in Louisiana, but oil imports have not made up the difference. Oil imports into the U.S. and into Louisiana have declined significantly during the past few years, and the net result is the existence of excess refining capacity which has caused some marginal refineries in the state to close down and has made many others decease production. Another effect of the lower import levels is that the Louisiana Offshore Oil Port (LOOP), which a decade ago was touted as being one of the major stimulants for the Louisiana economy, is now operating at less than one-third of its capacity.

The causes of this decrease in imported crude include the North Slope oil production, increased conservation, the national recession, and the increased refining capacity of foreign countries, including such oil exporting countries such as Saudi Arabia, Indonesia, and Venezuela. As these foreign producers expand their *downstream* refining capacity in the future, they will ship their refined products directly to the East Coast of the United States. In effect, Louisiana's role of importing crude oil and shipping refined products to the East Coast increasingly will be bypassed.

Major economic shifts are seldom made in a few years. Louisiana's refineries will continue to play a very important role in the state's economy. However, they will not be a source of major growth, which means that the construction and other industries which service them will certainly not expand, and these constraints will ripple through the state's entire economy.

Petrochemicals

Much of the above analysis on the future of refineries in Louisiana could be applied to the petrochemical industry as well. However, the petrochemicals have some substantial problems, or at least, problems of a different nature.

Petrochemical companies located in Louisiana because the state was close to available and inexpensive supplies of oil and natural gas, there were abundant sources of water for their steaming and cooling requirements, there was an abundance of land on a stretch of the Mississippi River accessible to both barges and ocean-going vessels, and electricity was relatively inexpensive. Petrochemical production in Louisiana tended to concentrate in bulk chemicals, which are shipped to plants in the Midwest, East Coast or foreign countries for further processing. The processes used in bulk chemical production utilize large amounts of natural gas as a feedstock and electricity for processing their chemicals. Recent developments on both the supply and demand side of the markets are having a negative impact on this industrial structure.

The Demand Side: The national and international recessions have had a deleterious effect on petrochemical sales but, as the national recovery works its way down to the bulk chemicals, sales should improve. However, a considerable proportion of Louisiana's petrochemical sales during the 1970s were made to foreign consumers, and these have declined in recent years. There are three major reasons for this decline. One is the international recession, the foreign recovery from which has been much slower than in the U.S., and there are considerable concerns being expressed about the extent and direction of the recovery in Western Europe and much greater concern about the developing countries.

A second reason is the high value of the dollar in the foreign exchange market. During the past three years, the foreign exchange value of the dollar relative to many currencies (excluding, of course, the Japanese yen) has increased almost 20 percent. The higher exchange value of the dollar makes U.S. products, including petrochemicals, more expensive in foreign currencies, and it makes foreign products less expensive in the U.S. market. The factors causing the high demand for the U.S. dollar in international markets—high interest rates and low inflation rates in the U.S. and political instability and increasing regulations in foreign countries—could continue for a number of years.

Another threat to the Louisiana petrochemical industry comes from increasing petrochemical production capacity in major oil extracting countries. Countries, such as Mexico, Venezuela, Saudi Arabia, and Indonesia, which had previously been flaring their natural gas, have built or are building petrochemical plants, many of which are designed to produce the very bulk chemicals which are Louisiana's staple chemical products. The natural gas marginal costs in these countries are virtually zero, their labor costs are lower and, with assistance of America, Western Europe, Japan, Korea and other countries, they are installing the most modern and efficient plants. Within a very few years, Louisiana's petrochemical plants could lose a considerable part of their bulk export markets and even some of their domestic markets to these major oil producing countries.

The Supply Side: All petrochemical plants use vast quantities of natural gas and electricity, but the majority of products produced by Louisiana-based petrochemical plants are especially natural gas and electricity intensive. Both of these ingredients in the petrochemical process have been sharply increasing in price, and the prospect for future prices is not encouraging.

One of the primary causes of concern is the Natural Gas Policy Act (NGPA). This measure discriminates against intrastate pipeline companies by such means as dedicating all gas from the Outer Continental Shelf to interstate pipelines, and decontrolling deep gas which is the major source of gas for intrastate pipelines. These, and other factors, have resulted in intrastate pipelines having higher gas prices and lower availability of gas than interstate pipelines.

Louisiana's intrastate pipelines actually had to purchase gas from the interstate pipelines during the early 1980s, but due to the decreased petrochemical production, gas is not being purchased from interstate pipelines now. However, if the demand for petrochemical products increases, Louisiana's intrastate pipelines could be forced to buy gas at a high price from the interstates once again. If there is a national shortage of gas, the NGPA stipulates that interstate sales to intrastate pipelines have a low allocation priority and this gas might not be avialable to Louisiana firms at any price. Thus, Louisiana petrochemical firms, which have been faced with a 250-percent increase in natural gas prices since 1977, could experience both higher prices and increased shortages in the future while their competitors abroad, or even in other states such as Oklahoma, will have relatively lower prices.

Electricity Prices

Traditionally, Louisiana has been a low energy cost state. This was true not only for oil and natural gas but for electricity as well. One of the factors attracting industries to Louisiana was its low electricity rates; consequently, many of the firms locating in Louisiana were firms, such as the petrochemicals, which were heavy users of electricity.

The spectre of a major reversal in Louisiana's energy prices has not yet occurred, but it will probably occur gradually over the next twenty years. Louisiana's industrial electricity rates (100 KW; 200,000 KWH) have risen about the same percentage as the national average (245 percent) between 1973 and 1982 but the state slipped from having the fifth-lowest electricity rates to having the twelfth-lowest rates among the fifty states. Hence, the change in electricity rates during the past ten years has not yet placed Louisiana in a noncompetitive position.

The problem is one which will appear over the rest of this century. Louisiana's electricity is generated primarily by natural gas and the majority of that gas is obtained from intrastate pipelines. As Louisiana's electric utilities lose their old and very low price gas contracts, and, as they shift to more expensive generating facilities such as nuclear or even coal plants, elec-

tricity prices will begin rising faster than the national average. Near the end of the century Louisiana could have industrial and residential rates at or above the national average. Louisiana will have lost one of its important competitive advantages: cheap energy.

Some Principles

The following are some principles for economic development of the state which are the suggestions of the author rather than definitive rules. Some of the principles conflict with one another and decisions will have to be made about priorities. Although the purpose is to outline general principles rather than to develop specifics, some relevant examples are given.

First, recognize that Louisiana's economy is integrated into the world's economy. One essential element in designing a program of economic development for the state is the recognition of the elementary fact that many of the most significant variables affecting the future of the state economy are beyond the control of Louisiana, or, even, the United States. We cannot control world oil prices, petrochemical production in Saudi Arabia or Venezuela, or the prices of coal in Poland, or wheat in Australia which influence exports through Louisiana ports. Such international variables as foreign diplomacy, or all of

The problem is exacerbated by the fact that the future direction of these variables and their impact on the state's economy are virtually unknowable. Educated guesses about future trends are possible, but a guess is a guess, no matter how educated or informed the source might be.

Given the current economic base of the state there is no way to eliminate this international dependency, so it is necessary to reduce the overall uncertainty by diversifying Louisiana's economy so that it does not depend so heavily upon a few international factors to determine the state's economic destiny. The necessity of diversification is a view held by all analysts and economic developers, but the path to diversification is more controversial.

A second principle for economic development is the avoidance of cliche driven policies.

During the past forty years there have been a number of development policies and strategies that have *grabbed* the headlines in newspapers and journals, been the subjects of numerous conferences and provided income for those who quickly emerged as development experts. After the surge of interest had receded, it was often difficult to determine the net effects on the economy. Transportation infrastructure, heavy manufacturing, service industries, and high-tech are examples of development policies that have had episodic periods of fame.

The latest *fad* has been *high-tech* development. Fortunately, the *high-tech* development strategy reached its zenith of serious popularity in Louisiana about a year ago, and is now viewed in a more limited and appropriate framework. This is fortunate because many other states with greater attractions have been pursuing a similar strategy for a number of years, and to expect Louisiana (which has one of the poorest educational records and few recreational, cultural and environmental attractions for the mobile personnel in this industry) such a policy, broadly pursued to the exclusion of other development activities, would have been a failure. *High tech* will only account for a small percentage of employment in the best of circumstances and high tech industries cannot provide suitable opportunities for that large proportion of Louisiana's work force which has limited skills.

This is not to say that Louisiana should not pursue a development strategy that might include some projects which could be classified as *high-tech*. Applied research on reducing costs or developing new products in such industries as agriculture, forest products, oil and gas extraction, petrochemicals, shipbuilding, and offshore tower construction are areas in which Louisiana can compete. The new Pennington Biomedical Research Center being built in Baton Rouge might afford the Baton Rouge community an excellent opportunity to develop technical spin-offs in bio-medical and nutritional areas; and applied research and technical employment opportunities might be generated by the commercialization of research activities at the state's universities.

A third principle is the recognition that the set of variables that most significantly determine long-run economic development are not narrow economic or financial variables or even the existence of natural resources.

Hong Kong, Taiwan, Japan, and Singapore are current examples of countries with high economic growth rates and few natural resources. The indigenous population's work ethic and discipline, recreational opportunities, cultural attractions, stability of the political system, quality of the education system, and the broad social-cultural-religious and political environments are very important in fostering economic development.

Many economic developers believe that only the *bottom line* is important, and that if sufficient financial incentives exist, firms will be attracted to the state. There is nothing wrong with the view if the *bottom line* is correctly interpreted, but it can be misleading if it is not. Consider an owner-entrepreneur who is currently operating his business in Denver and is considering relocation to Louisiana.

Louisiana might be an attractive state in a *bottom-line* financial profit sense, but the owner might decide that the cultural, educational, and recreational attractions for his family in Denver more than compensate him for the added profit in Louisiana. Similarly, a major national corporation might find it unattractive to relocate or to expand in Louisiana if its employees are unwilling to move to the state, or if it cannot attract technical or administrative personnel to live in Louisiana. Conceptually, these perceived disadvantages of Louisiana could be offset by generous state financial incentives, but such incentives could be prohibitively expensive.

A corollary to the above statement is that the greater the perceived social, cultural, and recreational disadvantages of a state the greater the necessity of financial incentives, labor training programs, and development assistance. States such as California do not have a great need for an active development program; other states, such as Louisiana in the 1980s, do.

A fourth principle is that broad and long-term policies, rather than specific and short-term policies, are generally more important for economic development.

The most promising economic development policies are often those directed at correcting broad and general problems, rather than those policies directed at correcting short-run problems or at attracting specific industries. In an increasingly integrated world market, costs, consumer preferences, trade patterns, and technology change too quickly for any state to rely upon any single industry, skill, technology, or service to be a long-term benefactor.

Education is one example of a broad-based determinant of economic development. Higher education has a vital role to play in economic development by providing a quality education which can produce competent and functional graduates and set standards for excellence that will permeate all levels of education in the state. Higher education institutions also have the role of engaging not only in broad academic research but also promoting research which can stimulate technical developments in Louisiana and can provide information and assistance to Louisiana businesses.

Vocational and technical education must focus on supplying a skilled workforce that is consistent with industry's requirements. The system of vocational education in the state needs more coordination among the various Vo-Tech districts, a more formal integration with business and industry, and a general improvement in administration.

The most important sectors of education are the elementary and secondary levels, not because they are preparing college-bound students, but because certain language and mathematical skills are essential for the development of human resources in the state. More *than 60 percent of Louisiana's high school graduates do* not *go* to college. It is this group which is most likely to remain in Louisiana, and it is to this group which potential employers look when they are evaluating worker availability.

More disconcerting than the average performance of Louisiana elementary and high school students on the various achievement tests are the many reports from all sections of the state that applicants for jobs cannot read or write or perform the most simple arithmetic operations. Unfortunately, there are no simple or short-run solutions to this problem.

Even if the state school systems had the worst teachers and administrators now, and even if the state could hire the most competent and devoted teachers and staffs in the future, the inflow of new faculty and administrators would be so low, relative to the accumulated stock, that the effect would not be noticeable for ten to fifteen years. Of course, Louisiana's schools do not have the worst faculty and staff, and it is unlikely that they could hire the best. But even if the schools had the best personnel, many factors other than the quality of personnel, affect the quality of education including student discipline and respect, values placed upon education, and student peer group attitudes toward education. Where these qualities are lacking, the educational system is not likely to produce competent—or even functional—human resources for the future development of the economy.

Education quality and other basic and general prerequisites for economic development are very difficult to remedy. Seldom is the problem a simple budgetary one, especially since the proportion of the population which is of school age will be much lower now than it was fifteen to twenty years ago. More likely, it is an attitudinal problem intertwined with the broad social and family environment and the habits of the population. Even the budgetary causes are difficult to remedy because the benefits of such allocations won't be realized for many years, and the current generation of politicians and voters expect to see short-term benefits produced by their current expenditures.

The recent actions taken by the BESE Board that require certain core courses to be taken as a requirement for a high school degree are to be commended. Other general remedial actions could include placing a greater emphasis on the educational, as opposed to the social, political or athletic objectives of the school systems; increasing the awareness of the short- and long-run economic payoff of academic excellence; institute an effective and broad-based incentive system for teaching quality; establishment of a work-study program for students and other cooperative programs between schools, businesses, and governments; increase parent involvement with schools, and increase their awareness of, and appreciation for, educational quality.

The broad and general factors that determine economic development are not solely those within the reaches of state and local governments. Many are private or nonprofit activities. One example is commercial banking, which is extremely important for all aspects of economic development. Bankers need to be involved in all aspects of economic development; including the development of exports and the financing of export traffic through Louisiana ports. Louisiana banks are relatively small, profitable, and conservative. Although a few Louisiana banks have outstanding records in financial innovations and economic development, Louisiana banks, on the average, have been much less active, competitive, and innovative, especially in international activity, than the banks, say, in Florida and Texas.

The fifth principle is to remove obstacles to economic development. Although, there are no hard data to support it, many economic developers believe that the state lacks entrepreneurial resources, i.e., individuals willing to start and manage their own companies. The data on the importance of small businesses is mixed, but it appears that firms employing fewer than one hundred employees account for approximately 50 to 60 percent of new jobs created, but they also account for nearly 50 percent of the number of jobs lost due to firms going out of business. Louisiana's growth has been stimulated more by large plant expansion and the establishment of branch plants than by the development of new firms. This dependency on imported branch plants will have to change in the future as Louisiana loses some of its previous competitive advantages, and—based on national forecasts—as the state-hopping practices of firms decrease.

There are various positive measures which the state can take to encourage entrepreneurs, such as providing information, analysis, and financial incentives, but the state can also eliminate some activities it is currently doing. The removal of occupational licensing, unnecessary permits, restrictions and regulations of various forms would make it much easier for the budding entrepreneur. For example, for some businesses it requires a major research effort to determine the permits required to start a business and to determine how to get them. Each license, restriction, regulation or permit, taken in isolation, may appear to be reasonable, but the cumulative effect discourages entry.

Sixth, a low-paying job is better than no job. One frequently hears the statement that some industry—e.g. tourism or forest products— should not be targets for development because the jobs which are created are low-paying ones. Holding other factors constant, it is obviously better for the state to spend $1 million to create 1,000 jobs at $15 an hour than to create 1,000 jobs at $5 an hour. However, it must be recognized that Louisiana has a relatively large number of people with few skills or knowledge and that such people can find employment only in relatively low wage occupations. If only high wage, high skill jobs are created, Louisiana will import skilled labor from other states and the indigenous low-skilled population will continue to have high unemployment rates.

Second, low-paying industries, such as tourism, generate demand for high-paying jobs such as public relations experts, construction workers, architects, lawyers, and chefs. There is a *trickle-up* effect at work in many major tourist centers such as Orlando, or Colorado, which attract related high paying industries. One of the major problems confronting economic development in Louisiana is to generate employment in the largely rural areas of the state where the unemployment rates are more than twice the national average. One of the best available alternatives during the remainder of this century is to attract low-skilled, low-wage industries.

The seventh principle is to recognize the state's strengths and weaknesses. Some of the state's weaknesses were discussed above; some of the state's strengths are the following:

Though declining in relative importance, the state has large quantities of oil and gas remaining which should give the state time to adjust its economic base; the state can also increase the exports of its expertise and capital equipment in oil and gas exploration and production to other countries;

The state sits astride one of the world's most productive fisheries and the related processing and marketing of these resources are underdeveloped;

One of the world's largest navigable inland waterway terminates in the state and the intracoastal waterway traverses the state. Between 1962 and 1982 the ports of Houston, Pascagoula, Mobile, and Miami grew much faster than the ports of New Orleans and Baton Rouge in terms of tonnage handled, and generally even faster in terms of the value of cargo handled. There are several explanations for the relative decline in the state's ports. One explanation is that the ports of New Orleans and Baton Rouge handle bulk cargo which is very sensitive to international supply and demand factors. However, several actions have been taken, and several others are in the planning state, to increase the activity at the ports. One of the more well-known proposals is the deepwater channel, which will make Louisiana's Mississippi River ports more competitive. Even if the Port of New Orleans loses ground to the Port of Houston, that port and others in the state will continue as an important resource for the state.

The state has large and quickly renewable pine forests. Although employment in forestry and paper products declined during the 1970s, Louisiana has significant labor and natural resources which could be utilized in the plywood and paper products industries. More importantly, many of these resources are located in rural northern Louisiana which suffers from especially high unemployment rates.

As the national and international demand for lumber and paper products increases and, as the national markets move increasingly to the South, the wise management of Louisiana's forests and the aggressive marketing of Louisiana as an attractive location for forest products processing plants could be a major factor in improving the economy of Louisiana's most economically depressed parishes.

The nation's population and economic activity are moving toward Louisiana. Between 1800 and 1940, the center of the U.S. population moved almost directly west from Baltimore, Maryland. Since 1940, and increasing within the past twenty years, the nation's population center is moving in a southwest direction. The center of the U.S. population is currently fifty miles southwest of St. Louis, and its direction is pointed towards northeast Texas/northwest Louisiana, although it will probably never reach that location.

The symbolic value of the movement of the population center toward Louisiana is that the state is located in the center of the Sun Belt region. Although, Louisiana might not be a direct beneficiary of the movement to the Sun Belt, Louisiana is located between such fast-growing states as Florida, Texas, and Georgia.

Compared with twenty to thirty years ago, the prospects are much improved for Louisiana attracting regional offices, regional distribution centers, regional transportation services, and family travel vacation and recreational activities. State park systems with attractive lodges, and convention and recreational facilities have been developed by such states as Kentucky and Alabama. Louisiana has many potentially viable locations for such facilities which could attract tourists and regional conventions. The construction of I-49 should enhance these regional opportunities.

One of the most encouraging signs for the future of economic development is the recognition by many influential individuals in the state that some long-term structural problems exist in the Louisiana economy and that remedial action needs to begin now. Due to the activities of these individuals in private business, non-profit organizations, industrial associates, labor unions, and the legislative and executive branches of state government, the state has enacted incentive programs and technical assistance and job training programs. Additional legislation most likely will be passed in forthcoming legislative sessions. It is too early to assess the effectiveness of the recently enacted programs but they are indications of a commitment to tackle the state's economic problems.

Financial Incentives

No discussion of economic development would be complete without some mention of financial incentives or inducements. There are so many incentives used by states and so many limitations and qualifications that even a summary of such business incentives cannot be presented here. A broad classification of such incentives are: interest subsidies, direct loans, loan guarantees, equity capital, tax credits, tax deductions, enterprise zones, tax exemptions, energy tax credits and loans, research and development subsidies, job training, site preparation, low-cost building leases, counseling services, and a wide array of technical information, assistance, and evaluations.

Louisiana has employed a wide variety of incentives, and undoubtedly will institute additional incentives in the future. Although additional incentives might be effective in stimulating economic development, the marketing of these incentives has not kept pace.

When Louisiana is attempting to induce a national firm to locate in the state, information on the state's financial inducements are, presumably, presented in a thorough and effective manner. The problem is that the small business firms, or a single individual contemplating the start of a business in Louisiana, is not aware of the various incentives which currently exist. Louisiana has some very innovative development incentive programs, but much of the information is not getting to those who might use them.

The effective distribution of this information is important because Louisiana's future economic growth is unlikely to consist largely of national firms locating branch plants in the state. Other states are competing very hard for these plants. Louisiana is not going to remain as attractive for refineries and petrochemicals and, nationally, less relocation among all states is projected for the future. Although the state needs to continue its attempts at attracting large plants and relocations from other states, its economic development will increasingly consist of the expansion of plants and firms currently located in the state and in new firms started by domestic residents.

Distributing information to small firms and to prospective entrepreneurs is very difficult because they are not easy to identify. Perhaps the best way is to inform the advisors to small businesses of Louisiana's incentives. Financial advisors, bankers, loan officers, accountants, and lawyers are examples of people who should be provided this information. The small business development counselors at the state universities should also be provided with simple brochures. A state economic development hotline providing incentive information should be established and widely publicized.

One of the most widely used financial incentives in Louisiana is the industrial revenue bonds (IRB). These bonds, which are issued by local, state, or special government districts, are tax exempt for federal income tax purposes and thus, carry a lower market rate than similar bonds issued by private companies. IRBs have been used by most states and, from a national perspective, they result in the misallocation of capital resources because capital is taken from high-yielding, privately financed projects (say, with a 13-percent interest rate) to lower yielding projects (say, with a 9-percent rate) which are often guaranteed. IRBs are inefficient from a national perspective, and Congress is repeatedly being requested to constrain or to eliminate them. However, from the state's perspective IRBs are the most efficient incentives available to enable small firms to participate. An umbrella IRB is a single IRB issue which consists of several independent projects. This will permit small businesses throughout the state to participate in IRB financing, and it will spread the risk among several independent projects, thus lowering the interest rate.

Another well-known industrial inducement in Louisiana is the ten-year exemption on property taxes for qualified property. Perhaps the strongest argument in its favor is that the property tax is one of the most inefficient taxes, as well as being the most difficult taxes to administer. The ten-year exemption of qualified property reduces the overall inefficiency of the property tax. Also, the exemption probably has resulted in capital-intensive firms locating or expanding in Louisiana. The negative points of the exemption include lower property tax revenues for local government or higher tax property rates on non-exempt property; the exemption encourages capital intensive—not labor intensive—companies, and the exemption distorts the allocation of resources between labor and capital.

Although many capital-intensive firms have strongly supported the continuance of the property tax exemption, some firms might find their loyalties wavering as their property ages and the ratio of their exempt property to their total property decreases.

As a general rule, location incentives which take the form of tax exemptions, tax deductions, credits, or postponements, are not as desirable as direct government expenditures. When direct expenditures are used to subsidize economic development they are clearly visible, and the political debates can weigh the known costs with the benefits. When tax reductions measures, know as tax-expenditures are utilized, the amount of the subsidies is hidden and the costs are unknown. Secondly, many firms are unable to take advantage of the tax-expenditures because they do not have sufficient profit, property, or sales subject to taxation. Direct budgetary expenditures are preferred because the amount of the subsidy is clearly visible and direct expenditures can be made available to firms regardless of their tax status. Also, the amount of the direct expenditures can be leveraged with federal or private funds to obtain a greater impact.

Endnote

[1] U.S. oil imports from the Middle East countries were 8.4 percent of domestic demand in 1973; 21 percent in 1977 and 3.6 percent in 1983. Mexico is now the most significant single supplier of oil to the U.S. Some observers have stated that due to the decrease in the percentage of oil consumption which is imported from Middle Eastern countries, the United States need not concern itself with developments in that section of the world. This view, however, ignores the fact that the price of oil is determined by the world market, and that any factors which influence the world's supply and demand for oil will also influence the price of oil in approximately the same magnitude in the United States. In addition, the international commitments of the United States to Japan and Western Europe through the International Energy Agreement, ensure that any disturbance in a major oil producing region of the world will have an impact on oil prices in the United States.

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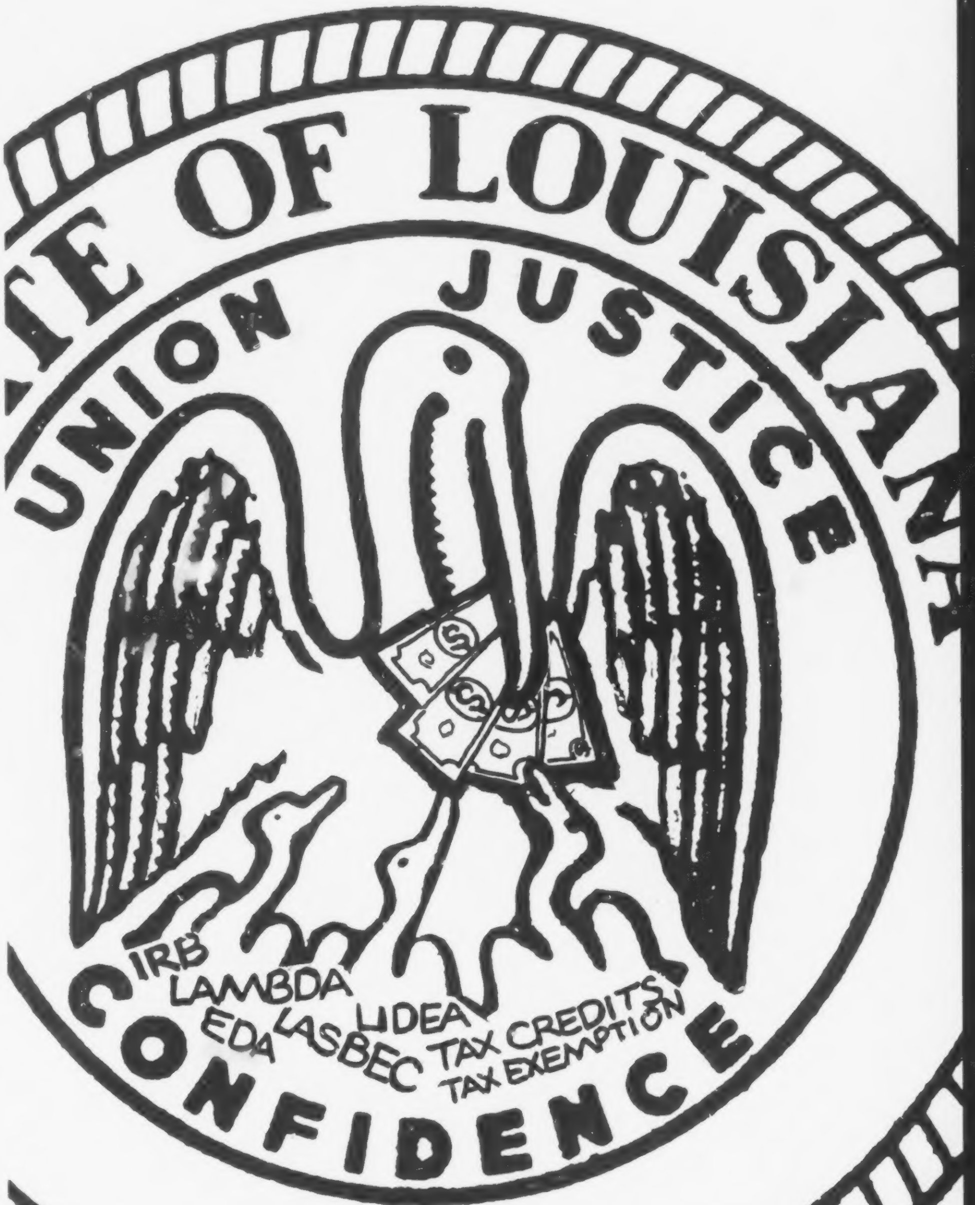
Financial Assistance in Louisiana

Industrial inducement has become a household term in Louisiana, where it has been given state government's highest priority in the struggle to resurrect a depressed economy. Economic development specialists representing every corner of Louisiana are eagerly seeking out potential businesses and industries to bolster employment in their areas. Corporations in parts of the nation already experiencing the beneficial effects of national recovery are looking for sites in which to relocate or expand their operations. Bringing these firms to Louisiana is the first priority of the state's industrial inducement specialists.

Rivalry in attracting new industry, while keeping existing corporations satisfied with their choices of location, has caused many state and local governments to establish industrial inducement programs. Industrial inducements are packages of amenities used by various competing areas to convince management of the most favorable site location. Whatever they might include, such packages must provide the lowest unit of cost for production.

Management typically must face a number of factors in making site selections. These include the cost and availability of raw materials, transportation, labor, energy, and access to markets. Companies, after having chosen an area in which to locate, focus on the selection of a specific site. Important considerations at this stage include the overall business climate, quality of life factors affecting company employees, and the corporate and



personal tax structures.

A typical industrial inducement package includes a mixture of financial assistance programs, special governmental services, and tax incentives. These programs usually are designed to overcome their sponsor's perceivable shortcomings in other critical areas affecting site selection, and to increase the competitive edge of a locality within its geographical region. The most widely used incentives include an array of such money-saving devices as industrial revenue and general obligation bonding; industrial development credit corporations; government-owned industrial park sites; employee recruitment and job training programs; tax exemptions on raw materials; freeport laws; tax exemptions on inventories; sales or use tax exemptions on new plants and equipment; ad valorem tax exemptions or moratoriums on land, capital improvements, equipment, and machinery taxation; and venture capital funding.

Generally speaking, financial incentives offered to encourage economic development growth by private enterprise can be characterized by the following types: grants, interest subsidies, equity and near-equity financing, tax-exempt financing, and tax incentives. Louisiana offers industrial revenue bonds, general obligation bonds, corporation tax credits, special industrial areas, industrial ad valorem tax exemptions, and restoration tax abatements, as well as assistance through the Louisiana Minority Business Development Authority, State Market Commission, Louisiana Small Business Equity Corporation, Louisiana Enterprise Zone program, Louisiana Industrial Training program, venture capital company tax credit program, freeport laws, energy conservation sales and use taxes, and the Industrial Development Corporation as its package of financial assistance instruments and programs.

Bill Little, executive vice president of the Baton Rouge Chamber of Commerce, says his experience indicates there is "no one best place" in which a company should locate, rather, he says, "it ordinarily boils down to the best two or three sites." Once an industry has agreed to begin operations in a state, and cities begin to vie with one another, the selection decision then can hinge on such a matter as the quality of the local school system. "Generally speaking," he says, "the selection will be most heavily weighted by considerations of production costs and predictability of profit."

Development by Banks

Louisiana banks have stimulated economic development primarily through their normal commercial banking activities such as commercial lending, leasing arrangements, pension and profit sharing plans, business services, and investment management. State banks also increased their involvement with SBA loan programs, small business investment corporations, industrial revenue bond financing, the Farmers Home Loan program, and the Louisiana Minority Business Development Authority program. The Legislature has debated a multi-parish banking law in Louisiana, and passage of such a law, many bankers argue, would enhance state banking activity in economic development activities.

Development Districts

Louisiana's economic development districts provide local input and guidance to the Department of Commerce and Industry. The districts' functions include site selection, implementing manpower training programs, improving the local business image, providing local data, and coordinating with the Department of Commerce and Industry with the overall state economic development program.

Industrial Revenue Bonds

Industrial revenue bonds (IRBs) are the most popular direct financial incentives utilized by states for economic development. These bonds provide a lower rate of interest to business borrowers and longer terms of repayment than loans available from commercial lending sources. All states have authorized IRBs, but the provisions imposed on their use vary greatly. IRBs can be issued either by the state or by local political subdivisions. Louisiana's state government does not issue IRBs, although other states' do. California, for example, issued $217 million of state IRBs in 1981, and Massachusetts issued $221 million. Kentucky was the only state in the South to issue IRBs that year, in the amount of $121.8 million.

Locally-issued IRBs were the predominant form of direct financial incentive and were utilized by forty-five states across the country in 1981. Louisiana issued $42 million of this type IRB. Other states utilized local IRBs much more heavily. For example, Alabama issued $1.2 billion; Texas, $950 million; Florida, $525 million; and Virginia, $713 million in IRBs among the Southern states. Other states such as Minnesota, Pennsylvania, and Indiana also relied heavily on locally-issued IRBs.

IRBs may be issued by the governing authorities of any Louisiana municipal corporation or parish to encourage industrial development. These are subject to the approval of the State Bond Commission and the Board of Commerce and Industry. They can have a maturity of thirty years with no maximum interest rate, and may be sold through public or private sale.

The number of jobs to be created, the relationship of the project to existing businesses within the political subdivision, and the compliance of the project with health, safety, and environmental guidelines are among criteria considered by issuing authorities, which have no financial liability for payment of the bonds. IRBs are secured by the financial worth of both the company signing the lease and the property, and they can be used to purchase and improve land for industrial plant sites, construct industrial plant buildings, purchase machinery and equipment, and construct and equip pollution abatement and control facilities.

IRBs also can be used by nonprofit industrial development (ID) boards to provide tax-exempt financing for both industrial and commercial projects. An ID board may be formed by three or more electors of a municipality or parish who make written application to the governing body of the political subdivision. Such bonds have a maximum term of forty years, instead of the thirty years allowable for IRBs issued by political subdivisions. All other characteristics of the two programs are the same except for the eligibility requirements.

ID boards may issue IRBs for a more extensive variety of projects than those sold by political subdivisions. They can be made for industrial plant sites, buildings, and equipment; industrial pollution control facilities; office buildings and all movable and immovable properties thought necessary for the operation of an office complex, including parking garages, hotels, warehouses, wholesale and retail stores, and restaurants.

General Obligation Bonds

General obligation bonds (GOs) may be issued by parishes, wards, municipalities, and industrial districts to finance industrial development projects for businesses for no more than 20 percent of the assessed valuation by the issuing authority. Before the bonds can be issued and sold, they must be approved by the Board of Commerce and Industry, the Bond Commission, and by an election of qualified voters of the political subdivision. The term of the bond, which can be sold only at public sale, may run as long as twenty-five years.

GOs are backed by the full faith and credit of the issuing authority, unlike typical IRBs, which are secured only by revenues from the project and by the company's assets. The two are similar in all other respects. Specifically, the proceeds from the bond issue may be used to acquire industrial plant sites, construct plant buildings, and acquire manufacturing machinery and equipment in an amount of up to 100 percent of project costs.

Facilities acquired and constructed with GO proceeds are exempt from ad valorem taxes. Proceeds may be used for refinancing only if the previous financing was tax exempt. These may not be used for a change of ownership in an existing facility. The criteria considered by issuing authorities includes the number of jobs created, the relationship of the project to existing businesses within the issuing political subdivision, and the compliance of the project with health, safety, and environmental guidelines.

Other Incentive Programs

Direct state loans, loan guarantee programs, and enterprise zones are other types of financial incentive programs utilized by many states for their economic development efforts. Louisiana has a program featuring each of these financial incentives.

The State Market Commission made $373,777 in loans for agricultural plants in 1981. Louisiana's Minority Business Development Authority (LAMBDA) had $1.9 million available for loan guarantees in February 1982, and the state also began operating enterprise zone programs in 1982.

The LAMBDA provides loan assistance to businesses operated by socially or economically disadvantaged persons unable to obtain such assistance from traditional sources. Loans may be made directly by the authority or in participation with a bank, financial institution, or federal agency. LAMBDA loans cannot exceed 75 percent of property secured by a first mortgage, or 50 percent of a property secured by a second mortgage up to $50,000. Participation by the LAMBDA may not exceed 75 percent of the total need of the borrower.

A five-year limit is placed on these loans, although a renewal or extension, not to exceed a total of fifteen years, can be considered under certain circumstances. The authority sets the interest on all loans at rates no lower than the average charged by the U.S. Small Business Administration (SBA). Balloon notes are renewed at the prevailing interest rate at the time of renewal.

Security for the loan may include mortgages on real or personal property, money due on contracts, assignment of warehouse receipts, and assignment of receivables or pledges of inventories. The authority cannot make or participate in any loan that results in the secured property's being burdened with an outstanding indebtedness of more than 75 percent of its real value. Unpaid principal and interest on direct LAMBDA loans, outstanding at any one time, cannot exceed $1 million.

Market Commission

Loans are made by the Market Commission of the State Department of Agriculture for buying, building, or improving existing agri-industrial plants. The facility must be used for processing, mark-

IRB
LAMBDA
LIDEA
EDA
LASBEC
TAX CREDITS
TAX EXEMPTION

eting, distributing, or storing agricultural products. Priority is given to applicants providing, or expecting to provide, new and expanded job opportunities upon completion of a facility.

The maximum amount of these loans is $300,000 and cannot exceed 75 percent of the value of the property offered as security when covered by a first mortgage, or 50 percent for a second mortgage. A maximum loan term of five years is allowed, although renewals may extended for a total of fifteen. Loan proceeds may be used for costs associated with the purchase, construction, or necessary improvement of any agricultural plant. Property offered as security cannot be encumbered in excess of 75 percent of the appraised value as a result of loan approval.

Interest rates are established by the commission annually and cannot be less than the average of the rates charged by the Farmers Home Administration, the Board of Cooperatives, and the SBA. Balloon notes may be considered in scheduling repayment, with the final payment not to exceed 75 percent of the total amount of the original loan.

LASBEC

State-financed equity/venture capital corporations are another form of financial incentive for business, although utilized by only eight states in 1981. Louisiana created the Louisiana Small Business Equity Corporation (LASBEC) in 1982, and the Legislature financed it at $2 million. In 1981, the funding of the other eight states' programs were comparable to Louisiana's $2 million investment. LASBEC does not lend or guarantee loans directly; instead, funds are used to apply leverage to licensee banks, small business investment corporations, and development companies to create greater sources of venture capital and long-term financing for Louisiana small businesses.

One type of financial incentive Louisiana has not tried is the privately-sponsored development credit corporation. These are known in some states as business development or development credit corporations. Even though the corporations are operated privately, they are authorized by state legislation and function under state guidelines. Sixteen states had these programs by 1981.

The Massachusetts Business Development Corporation (MBDC) was started in 1953 by financial institutions pooling money to assist promising firms that did not qualify for conventional loans. Loans totaling more than $100 million have been approved by the MBDC since its inception. The Massachusetts Capital Resource Company (MCRC) was established in 1977 by life insurance companies to provide high-risk capital to business. In 1981 the MCRC made $16.4 million in loans.

Other states boasting such private development corporations include Arkansas, Florida, Georgia, Iowa, Kansas, Kentucky, Maryland, Michigan, Missouri, Montana, Nebraska, New Hampshire, New York, North Dakota, and South Carolina. Some form of a privately-sponsored development credit corporation should be considered for Louisiana.

Enterprise Zones

Louisiana's Enterprise Zone Program is a package of tax exemptions and other incentives designed to attract business and industry to specifically-designated urban and rural locations. These incentives are discrete from any other state-sponsored incentives, with the exception of the corporate job tax credit.

Application to obtain the benefits of the Enterprise Zone Program are made through the Department of Commerce and Industry's Financial Programs Administration. Exemptions are granted to applicants by the Board, upon approval of their applications, for a period of five years and can be renewed for an additional five-year period.

Industrial Training Program

The Louisiana Industrial Training Program, commonly referred to as the *Start-Up Training Program*, is a direct service to new or expanding manufacturing plants. Commerce and Industry's Technical Services Division is responsible for the design, development, implementation, and administration of job training programs to meet the specific needs of new or expanding industries. This training amenity is featured as a primary inducement at almost all presentations to prospective industries.

Many firms have indicated their final decision to locate in Louisiana was predicated on the availability of this program's specialized, job-related training to their new production employees. It includes recruiting prospective employees, providing qualified instructors, furnishing training aids, and arranging for training sites. The program's attraction for Louisianians is that it aids in creating new and better jobs, and provides the necessary training to qualify unskilled and semi-skilled workers for immediately-available positions.

Tax Exemptions & Credits

Tax exemptions, deductions, and credits are traditional types of financial incentives used for economic development utilized by most states. Louisiana has used the ten-year property tax exemption as its main incentive for businesses to locate in the state for thirty years. Thirty-three other states had a similar form of property tax abatement in effect in 1981. Louisiana's other corporate tax exemptions are also similar to those widely used across the United States.

Industrial Tax Exemption

Use of industrial tax exemptions by state and local governments in the United States has increased rapidly in recent years. Only thirteen states (including Louisiana) offered property tax exemptions to new industries in 1967. The number increased to thirty-seven by September 1983.

The Louisiana industrial tax exemption was made part of the new state constitution in 1974. It allows the Board of Commerce and Industry to grant ten-year, renewable exemptions from state, parish, and municipal property taxes on buildings, equipment, machinery, and land improvements to any manufacturing establishment that desires to construct or expand a plant in the state.

Louisiana's program, unlike similar tax programs in some other states, does not include exemptions for land or inventory. A key feature requires exempted manufacturers and their contractors to give preference to Louisiana manufacturers, suppliers, contractors, and labor, except where not reasonably possible to do so without added expense or substantial inconvenience or sacrifice in operational efficiency.

Special attention is given to those applicants agreeing to use, purchase, and contract for machinery, supplies, and equipment manufactured in Louisiana, or in the absence of Louisiana manufacturers, sold by state residents. They must agree also to use Louisiana contractors and labor in the construction and operation of the proposed tax-exempt facilities.

Venture Capital

Tax credits to state capital companies in exchange for their investment in small and medium-sized businesses are made through the Louisiana Capital Companies Tax Credit Program. Application for the credit is made through the Department of Commerce, in accordance with the provisions of the *Administrative Procedure Law* for making an application for certification of a capital company.

Jobs Tax Credit

The intent of the Jobs Tax Credit program is to reward the creation of new full- and part-time jobs in Louisiana. Any corporate taxpayer who establishes or expands a business enterprise in the state will be allowed a credit against the tax liability due under Louisiana's corporate income tax law. A new employee is defined as a person residing in Louisiana, and hired to fill a position which did not exist during the taxable year for which the credit is allowed. This tax credit is provided in lieu of the ten-year ad valorem tax exemption.

Industrial Areas

Louisiana parishes can create, with the approval of a majority of the local landowners, a special industrial area in any section not within a municipality. An industry located in such an industrial area, so long as it provides its own utilities, road maintenance, police, and fire protection, is free from taxation from any special service district whose services it neither needs nor uses.

Restoration Tax Abatement

The Restoration Tax Abatement is an exemption for property owners who expand, restore, improve, or develop an existing structure or structures in a downtown, historic, or economic development district established by a local governing authority or in accordance with law. This is a limited, five-year ad valorem tax rate based upon the assessed valuation of the property for the year prior to the commencement of the change. These abatements are granted by the Board of Commerce and Industry, with the approval of the governor and the local governing authorities, and begin after completion of construction.

Freeport Laws

Freeport Laws are concerned with ad valorem tax exemptions on shipping cargoes and may be divided into three parts. The first deals with items imported from outside the United States: these goods, commodities, and articles are not subject to ad valorem taxes so long as they remain in their original containers (in most instances) on the public property of the port authority or docks of the common carrier where they first entered the state.

The second of these ad valorem tax exemption laws applies to raw materials. It includes goods, commodities, and other articles being held on the public property of a port authority, on docks of any common carrier, or in a warehouse, grain elevator, dock, wharf, or public storage facility in this state for export to a point outside of the United States.

A third Freeport Law excludes goods, commodities, and personal property in public or private storage while in transit through the state in interstate commerce. The point of origin and the final destination must be outside Louisiana. Exempted items must remain in the original containers to qualify.

Energy Conservation

Commerce and Industry has the power to exempt sales and use taxes received from manufacturers, provided that a modification or replacement to a manufacturing facility, process, or equipment results in the utilization of less energy per unit of output. Conversions to permit the use of an alternate substance as a fuel or feedstock are also among the criteria for exemptions. This program will not apply after December 31, 1989.

Industrial Development Corp.

Another kind of tax exemption instrument is the Industrial Development Corporation (IDC). These can be established to promote, stimulate, develop, and advance the business prosperity and economic welfare of Louisiana and its citizens; to encourage and assist through loans, investments, or other business transactions in the location of new business and industry in this state, and to rehabilitate and assist existing business and industry. The IDC may borrow money from members and issue securities and evidences of indebtedness, and it may secure them. It may make loans, acquire good will, business and assets of persons, firms and corporations, and may acquire real estate to use for the purposes of the corporation.

Corporations authorized to do business in Louisiana may purchase, hold and dispose of the securities of the IDC. Financial institutions are authorized to become members and make loans. The corporation must set aside a portion of earned income each year. It can borrow money to the extent that the total obligations of the corporation do not exceed ten times the paid-in amount of the outstanding stock in the corporation.

Summary of Tax Exemptions

A total of 8,833 industrial ad valorem tax exemption contracts have been granted in Louisiana since 1946. Their total capital value was in excess of $27.7 billion, and the program resulted in the creation of 205,604 permanent jobs and 527,465 construction jobs. The three newest incentive programs—-energy conservation, enterprise zone, and restoration tax abatement programs have been responsible for 443 contracts, with a total capital investment of $375.4 million.

These programs have resulted in the creation of some 5,075 permanent jobs and 3,228 construction jobs over the past three years, reports the Department of Commerce and Industry. The Capital Companies Tax Credit Program will not become effective until July 1984, although this program is expected to generate risk capital funds for new and expanding technologies.

State financial incentive programs have become more flexible and accessible to firms that would do business in Louisiana. Private enterprise's dynamic financial environment creates many situations in which prospective employers and developers may not be able to obtain needed financing. State programs exist in order to provide this necessary assistance in the best interests of the taxpayers.

LIDEA

The Louisiana Industrial Development Executives Association was first organized in 1964. LIDEA is a business organization of industrial development executives interested in fostering economic development in Louisiana. The group's 1984 legislative agenda includes: improving Louisiana education, promoting financial incentives for business, passage of multi-parish banking, creation of an industrial and economic development agency, promotion of Louisiana's image and international trade opportunities, and the consideration of natural resource and transportation issues on economic development.

Federal Government

The Economic Development Administration (EDA) helps communities plan and carry out projects to encourage private enterprise to expand and create jobs in low-income areas and other places facing problems of high unemployment. Eligible projects must be located in an EDA-designated redevelopment area. These are determined by EDA to be qualified for assistance when they meet such statistical criteria of need as high unemployment or low income. Redevelopment areas are designated after their economic development districts (usually parishes) have created overall economic development programs (OEDPs), and EDA has approved them.

EDA's Title II, Business Development Assistance, is available to eligible businesses that retain or create permanent jobs by expanding or constructing plants in redevelopment areas. EDA-guaranteed loans generally exceed $500,000, and the average is about $1.5 mil-

Table 1
FEDERAL ASSISTANCE PROGRAMS

Agency	Title	Objective	Type of Assistance	Eligibility
Small Business Administration (SBA)	Economic Opportunity Loan for Small Business (EOL)	Provides Loans Up to $100,000 with a Maximum of 15 years	Direct Loans, Insured and Guaranteed Loans	Economic and Socially Dis-Advantaged Businesses
SBA	Management and Technical Assistance for Disadvantaged Business	Assistance Through Public and Private Organizations	Grants range from $15,000 to $306,350 Mean = $94,118	Economic and Socially Dis-Advantaged Businesses
SBA	Bond Guarantees for Surety Company	To Make Surety bonds available to small contractors	Loans range from $2,000 to $1,000,000 Mean = $80,000	Small Businesses
SBA	Service Corps of Retired Executives and Active Corps of Executives (SCORE: ACE)	Utilize the Services of Retired and Active Executives to Help Small Businesses	Advisory Services and Counseling	Small Businesses
SBA	Small Business Loans	To Aid Small Businesses which are unable to obtain funds in private credit markets	Direct and Guaranteed Loans. Range from $1,000 to $500,000. Mean = $55,000	Small Businesses
SBA	Management Assistance to Small Businesses	To Help established and prospective small businesses with management	Advisory Services and Counseling	Small Businesses
International Trade Administration	International Trade Promotion	To encourage exports from local businesses	Advisory Services and Counseling	Any Businesses
Minority Business Agency (Dept. of Commerce)	Minority business development management and technical assistance	To provide management and technical assistance. Project Grants.	Grants range from $10,000 to $3,000,000 Mean = $200,000	Minority Businesses

lion. The guarantee is for up to 90 percent of the loan; and the maximum term is twenty-five years for fixed-asset loans, and seven years for working capital loans. The borrower is required to provide an equity contribution of at least 15 percent of the project cost and collateral sufficient to provide a secondary source of repayment.

Other Federal Assistance

Table 1 is a sample of federal assistance programs for economic development available from federal agencies other than EDA. This list is presented only with the intention of providing our readers with sufficient information so as to encourage contact with the appropriate agency. As such, the listing provided here is in no way official, and the reader should contact the appropriate agency for complete details on the specific programs. The programs included are available, but not necessarily restricted to, small business (i.e., a business independently-owned and operated which is not dominant in its fields).

PAUL ADAMS is director of the State Incentive Program of the Department of Commerce and Industry, PAMELA DAVIDSON is a field representative for the Economic Development Administration, JOHN DUFFY JR. and DAVID J. MOLINA are with the Division of Research and Development.

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COLLEGE HIGHLIGHTS

Search Committee Is Named

A seven-member committee has been named to make a search for a new College of Business Administration dean to replace **Donald Woodland.** The committee members were named by **Carolyn Hargrave,** provost and vice chancellor for academic affairs, and include **Kenneth Orbach,** assistant accounting professor and committee chairman; **Jerry Baudin,** director of University budget and planning; **Herman Daly,** professor of economics; **Charles McCoy,** Louisiana National Bank board chairman; **Marsha Richins,** assistant marketing professor; **C. F. Sirmans,** finance professor; and **Glenn Weiss,** Student Government Association president. The committee is to recommend to the vice chancellor for academic affairs potential candidates for the position of dean by June 1.

Alumni Professors Are Named

Herman E. Daly, professor of economics; and **John L. Loos,** chairman of the department of history; have been named to the prestigious rank of *alumni professor* in recognition of their outstanding teaching performances and excellence in professor-student relations. The LSU Alumni Professorship is part of the Alumni Federation's faculty excellence program, carrying with it a $5,000 annual salary supplement until retirement. It is made possible by contributions to the LSU Alumni Fund.

Daly, who joined the LSU faculty in 1964, has won wide recognition as the foremost proponent of steady-state economics, which challenges the current emphasis on continual growth. Loos, a faculty member since 1955, has chaired the history department for the past twenty-two years, and has been credited with playing the key role in building his department into a position of prominence.

Parents Association Professor

The first *LSU Parents Association Professorship* award was presented to **Thomas R. Beard,** professor of economics, cited as being "the type of professor with whom every parent would want his child to study," at the November Faculty Council meeting. The new annual award for outstanding teaching performance, is funded by contributions from members of the association and carries a $5,000 stipend.

Beard, who served as the department of economics chairman from 1966-71, teaches courses in money, banking and macroeconomic activity, central banking and monetary policy, and aggregate economic analysis, as well as a seminar in monetary theory. He was commended for his "unusual capability for finding and developing academic talents," for lectures that are "always well prepared and intelligently presented," and for his excellent relationship with students.

Counselor Dottie Cox Retires

Dottie Cox, who during her eleven-year tenure as a College of Business Administration counselor assisted approximately 10,000 students, retired in January.

She began in the College of Business on the Shreveport campus in 1967, transfering not long after to the Baton Rouge campus where she was appointed a counselor in 1972. Mrs. Cox was responsible for helping Junior Division students interested in entering the College of Business Administration. She also served as a faculty advisor to Delta Sigma Pi and the Business Administration Leadership Council. The Coxs have two "grown and married" children and one seven-year-old college, her granddaughter appears to be a certain beneficiary.

LSUS Receives Chair Pledge

The Home Builders Association of Shreveport-Bossier has added to the momentum to establish a partially-endowed chair in real estate at LSU in Shreveport by pledging a $10,000 donation. The total pledged amounts to $110,000 of the $200,000 goal needed by next year to allow the University to endow the chair.

Research

A.M.M. Jamal, research economist in the Division of Research, and **Geneva Carroll,** sociologist for the Governmental Services Institute, have recently completed the first phase of an Occupational Information System for Louisiana under a grant from the Louisiana Department of Labor.

Allen H. Friedberg, assistant professor of accounting, recently directed a system analysis of Shreveport's Boxco, Inc., performed by a class of accounting students. The company is owned by Barry Box, an LSU alumnus.

New Positions Announced

The College has received three new positions for 1984-85. These will be used to create a management information system faculty. The program will be housed in the Department of Quantitative Business Analysis.

MBA Evaluation Is Set

Professors **Dan DeHayes** of Indiana University and **Ron Johnson** of Texas A&M have been asked to evaluate the College of Business Administration's MBA program. This evaluation will occur in the Spring.

Computers: Minis and Micros

The University has purchased a Data General MV/10000 which will be placed in the CEBA main lobby.

John Desmonds, the building's designer, has been retained to plan the renovations. This computer will be used for instruction and light research. Software will include SAS; and both undergraduate and graduate students will be encouraged to make use of this enhanced computer capacity.

Grants Awarded

Steven M. Buco, experimental statistics, has received support from the Baton Rouge Chamber of Commerce for his project, *An Analysis of Community-Related Concerns of Baton Rouge Citizens.* **John Manson Jr.** Economic Development Center, has received support from the Foundation for a Better Louisiana for a project entitled *Small Business and Foreign Markets: Barriers and Policy Implications.* **James A. Richardson,** acting dean, has received support from private donors for his project *Graduate Training and Research.* **Loren C. Scott,** economics chairman, and James A. Richardson have received support from the Foundation for a Better Louisiana for the project *An Extension of the Louisiana Econometric Model.* **Alan J. Winters,** accounting, has received support from Peat Marwich Mitchell Foundation for the project *State of the Art: Accounting and Review Services.*

George R. Newkome, Center for Energy Studies, has received a grant from Gulf States Utilities Company for a project entitled *Energy Associates Programs.*

Papers & Publications

Thomas L. Dickens and **William D. Samson,** assistant professors of accounting, recently co-authored a paper, *An Analysis of the Savings Side of the Mortgage Refinancing Decisions*, to be presented at a Southwest American Accounting Association meeting. Dickens and Samson have co-authored, along with **Anthony P. Curatola,** assistant professor of accounting, *The IDC Expense/Capitalization Decision: Taxpayer Traits May Dictate Contrasting Choices*, published in the **Oil and Gas Tax Quarterly.** Dickens has also written *A Tax Planning Tool for Net Leases*, recently published in the **Commercial Investment Journal.**

Steven Golen, chairman of the department of business communications and office systems, and **Agnes Titkemeyer,** an instructor in the department, recently published an article entitled *Exposing Students to Concepts of Change*, in the November/December issue of **Voc Ed Business Education Insider;** and an article entitled *Creating an Effective Communication Climate Between Supervisors and Their Secretaries*, in the winter issue of the **National Educational Secretary.**

John Leonard, a visiting professor in the department of economics, recently co-authored with **Joseph Prinzinger,** an assistant professor of economics at California State University-North Ridge, a paper entitled *A Theoretical Exposition of Monopsonistic Exploitation in NCAA Sports*, published in the December **Atlantic Economic Journal.**

Robert J. Newman, associate professor of economics, has a forthcoming book, entitled *Growth in the American South*, being published by New York University Press. Newman also wrote a report entitled *The Influence of Unions on the U.S. Structure of Wages: 1973-1979*, published by the U.S. Department of Labor in August.

C. F. Sirmans, finance department professor, recently co-authored an article, *Yield Differences on Fixed and Adjustable Rate Mortgages*, with **Daniel Page,** an assistant professor in the department of finance at the University of Central Florida, published in the Winter 1984 issue of the **Quarterly Review of Economics and Business.** Sirmans recently published in the Winter 1984 **Commercial Investment Journal** An Analysis of Market Extracted Overall Capitalization Rates, co-authored with **Stacy Sirmans,** assistant professor of finance at Clemson University. He also co-authored with Stacy Sirmans and **Stanley Smith,** assistant professor of finance at Emory University, *Adjusting Comparable Sales for Assumption Financing*, to be published in **The Appraisal Journal** in January 1984. Sirmans also recently co-authored with **James Kau,** professor of real estate at the University of Georgia, *Changes in Urban Land Values: 1836-1970*, to be published in the January 1984 **Journal of Urban Economics.**

Glenn E. Summers, assistant professor of accounting, recently published an article in the December 1983 issue of **Management Accounting,** entitled, *The Trend Toward Software in Accounting.* He also has co-authored with Steven Golen, department of business communications and office systems; and **W. J. Harmeyer,** retired as president and chairman of the board of the Institute of Internal Auditors; *Audit Interviewing-A Monograph*, to be published by the Institute of Internal Auditors in the Spring.

Jerry A. Wallin, associate professor of management, recently co-authored with **Robert A. Reber,** professor of management at Western Kentucky University *The Effects of Training, Goal Setting, and Knowledge of Results on Safe Behavior: A Component Analysis*, published in the **Academy of Management Journal.** Wallin and Reber also recently had their *Validation of a Behavioral Approach to Occupational Safety: A Preliminary Investigation*, published in the **Journal of Organizational Behavior Management.** Another article, *An Applied Behavioral Analysis Approach to Occupational/Industrial Safety: Cost/Benefit*, written by Wallin and Reber along with Jagdeep S. Chhokar, a graduate student in the Management Department, was published in **Industrial Relations.**

James W. Wansley, assistant professor of finance, co-authored with Associate Dean **William R. Lane** and **Ho C. Yang,** assistant professor in the department of finance at the University of Wisconsin-Eau Claire, an article entitled *Abnormal Returns to Acquired Firms By Type of Acquisition and Method of Payment*, published in the Autumn 1983 *Financial Management.*

David J. Molina, research economist in the division of research and development, co-authored with **Robert L. Basmann,** professor of economics at Texas A&M, and **Daniel J. Slottje,** assistant professor of economics at North Texas State University, an article entitled *Budget Constraint Price as Reference Changing Parameters of Generalized Fechner Thurstone Direct Utility Functions*, recently published in **The American Economic Review.**

continued

The three men also collaborated on another article, *Some New Methods of Predicting Changes in Economic Inequality Associated with Trends in Growth and Development*, which appears as a chapter in a book to be published by Westview Press: **Approaches to International Development.**

Steven Golen, Larry Smeltzer, and **John Waltman,** department of business communications and office systems, were authors included in a new series of textbooks published by John Wiley and Sons, Inc. Golen and Smeltzer co-authored **Readings and Cases in Business Communications,** with **Ross Figgins,** professor of business communications at California State University at Pomona. Golen, Figgens, and **C. Glenn Pearce,** professor of business communications at Virginia Commonwealth Institute, co-authored **Principles of Business Communications: Theory, Application, and Technology.** Smeltzer and Waltman co-authored **Managerial Communication: A Strategic Approach.**

Aid for Nicaraguans

The University's Center for Latin American Affairs' director, **Rodolfo Aguilar,** led a mercy mission to Honduras in December to deliver clothing and medical supplies to Nicaraguan refugees housed in camps too close to the border to be served by many relief agencies. The mission included Carribbean Commission chairman **Dr. Alton Ochsner Jr., M.D.;** neurosurgeon **George Lohmann;** and State Representative **Louis "Woody" Jenkins;** and met with a representative of the United Nations High Commission for Refugees. Approximately $12 million is spent annually by the UN for relief for the 16,000 Nicaraguan and 35,000 Guatemalan refugees in Honduras—or about $300 per refugee per year. Medical supplies and clothing are desperately needed, and money is being collected for these items by the Carribbean Commission at 1407 State St., New Orleans, 70118. The Center for Latin American Affairs, under its public service mandate, is collecting clothing for the next shipment to the refugees. ■

LOUISIANA BULLETIN

Port Association Formed

The Ports Association of Louisiana (PAL) was formed January 13; during the first annual Louisiana Small Ports Conference at LSU in Baton Rouge. A call for participation by every port in the state was made by Jay J. Matherne, port director of the South Louisiana Port Commission.

Kuehn Receives Port Award

Philip G. Kuehn received the 1983 C. Alvin Bertel Award on January 26. The award is presented annually to the person whose contributions to the advancement of the Port of New Orleans are judged to be outstanding. The New Orleans Traffic and Transportation Bureau established the award in 1967 to honor the memory of one of its early officers, a leader in promoting the welfare of the port and maritime industry.

Burnside Terminal Anniversary

Twenty-five years ago Burnside Terminal pioneered the handling of import ores from ocean vessels to inland river barges for America's steel, aluminum, and chemical industries. Today the multi-purpose public terminal, owned by the Greater Baton Rouge Port Commission, is handling large exports of petroleum coke and steam coal, as well.

The deepwater facility at Burnside is located on the Mississippi River in Ascension Parish. This upriver location qualifies it for the lowest inland barge rates, and the same ocean freight rates as New Orleans and other Gulf ports.

Schultz Heads Assn. Chapter

Virgil L. Schulz, vice president of Bean Dredging Corporation, has recently been elected president of the Gulf Coast Chapter of the Western Dredging Association (WEDA). Schulz will host a regional meeting of the Gulf Coast and Midwest WEDA chapters at Mobile in June. He also serves as vice president of the Gulf Coast Dredging Association, and on the board of directors of the Association of General Contractors of America, Mississippi Valley Flood Control Branch.

Ronald McDonald House Opens

New Orleans received a gift of love

when Children's Oncology Services of Louisiana (COSLA) opened the doors of the New Orleans Ronald McDonald House, a home-away-from-home for families with children suffering from leukemia and other related illnesses. Located at 4403 Canal St., the facility will provide lodging for hundreds of families from throughout Louisiana and Mississippi that bring children to New Orleans for pediatric cancer treatment.

New Tax Program

A new state tax incentive called the Restoration Tax Abatement (RTA) has recently gone into effect in Louisiana. The RTA provides a five-year freeze on property taxes for renovated or restored *buildings listed on the* National Register of Historic Places or as contributing buildings in a *Register* or locally certified historic district.

The RTA is a tax benefit available for commercial, residential, and industrial renovations and may be used by owners occupying a historic building as a residence or office. Set up on a local option basis, it is designed to encourage renovation of derelict, vacant or under-utilized structures, and both rural and urban properties are eligible. The RTA may be combined with federal historic preservation tax incentives such as the 25-percent investment tax credit and the facade donation programs.

To qualify for the abatement, a property must have been recently renovated or must be undergoing renovation. The rehabilitation must not have been completed prior to October 15, 1982, and no new tax reassessment of the property caused by the rehabilitation of the building can have been paid by the owner.

For information and forms on the RTA for National Register buildings, contact Ann R. Jones, Division of Historic Preservation, P.O. Box 44247, Baton Rouge, LA 70804, 504/342-6682. Buildings located in downtown or economic development districts are also eligible for the abatement. Further information and application forms concerning these can be obtained from the Office of Commerce and Industry, P.O. Box 44185, Baton Rouge, LA 70804, 504/342-5398.

Egypt to Participate in Fair

Egypt recently announced it will participate in the 1984 World's Fair. The Egyptian Pavilion will feature a film connecting the relationship of Egyptian history and development to the Nile River. There will also be models of the river, tracing its development, and highlighting water-related projects. The Egyptian pavilion conforms to the fair's theme, *The World of Rivers: Fresh Water as a Source of Life*, according to John C. Weinwonn, Louisiana World Exposition commissioner general.

The Union Pacific System, which serves New Orleans through its Missouri Pacific Railroad, also unveiled plans to participate in the Fair, and will construct an exhibition building to house a display of railroad materials and a theater seating 150. Approximately 600 people an hour will be able to see the film, *Rivers of Steel*, which will feature many of the rivers the Union Pacific System runs along from the Pacific Northwest to the South.

Tax Refund Contributions

Appearing on line 14 of the *1983 Individual Income Tax* form are four lines allowing taxpayers who are due a refund to contribute to any or all of four organizations. Taxpayers may donate all or a portion of their refund to: the **Louisiana Wildlife and Fisheries Commission** for the preservation, protection, perpetuation, and enhancement of game and nongame wildlife and its habitat in Louisiana; the **Louisiana State Arts Council** for the granting of funds for the arts, artists, and arts activities to community groups, organizations, and associations; the **Louisiana Children's Trust Fund** for programs designed to prevent the physical and sexual abuse of and gross neglect of children; and the **U.S. Olympic Committee** to provide American athletes with the best training facilities.

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RESEARCH NOTES

Market Structure and Labor Productivity

In the traditional theory of the firm in economics, the firm's optimal choice of the capital/labor ratio is independent of market structure, if the production function is linearly homogeneous. An increase in competition will cause a reduction in the scale of the representative firm; however, the constant returns to scale implied by the linearly homogeneous production function will result in no change in the optimal capital/labor ratio. Robert E. Martin of the LSU Economics Department has been investigating the impact of increasing competition on the firm's optimal choice of capital, labor and labor training. The introduction of labor training makes a critical difference in the results obtained.

The firm's output is a function of the labor service supplied by a given stock of workers. In turn, labor service depends on both the number of workers hired and the quality of their service per hour. Increased labor training increases the quality of labor service per unit of time. Hence, the marginal productivity of labor is increased by labor training and reduced by additional workers. Increased labor training in the current period increases the marginal revenue product of labor in subsequent periods As output market competition increases, the marginal revenue product of all factors is reduced and the optimal labor training is reduced. This results in an increase in the optimal capital/labor service ratio. Therefore, Martin's results imply that market structure does have an impact on capital/labor service ratios.

The primary policy implication of this research is that labor productivity is positively related to market structure; i.e., labor productivity will be higher in more concentrated industries due to greater labor training. Martin and Randy Rice are currently engaged in the empirical testing of the hypotheses developed in this market structure model.

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A. M. M. Jamal and David J. Molina

The Economies of Louisiana and Its Neighbors

During the past two decades Louisiana and its neighboring states have experienced uneven economic progress and population growth. Some states, such as Louisiana and Texas, have experienced gains in population and per capita income exceeding the national average. At the same time, such states as Alabama, Arkansas, and Mississippi have lagged behind Louisiana and Texas and, occasionally, even behind the nation.

The purpose of this article is to compare the demographic profiles and the economic activities of Louisiana over time with surrounding states and the nation as a whole. The states to be compared are Alabama, Arkansas, Mississippi, and Texas. This analysis hopefully will provide insight into the industrial structure of the states in the region and also help determine the outlook for industrial development in Louisiana. The factors to be analyzed are population, income, employment, and unemployment, state revenues and expenditures, energy prices, and port activities.

Population

Table 1 describes the annual growth rate of the five-state area's population at five-year intervals since 1962. The data shows that the population of Louisiana grew faster than the other states in the region with the exception of Texas. Texas' population growth rate was extraordinarily high during 1977-82. The Louisiana growth rate also exceeded the national growth rate, except for the 1967-72 period.

Table 2 provides a distribution of the population by age groups for 1981. The region's states generally had a higher proportion of their populations under eighteen-years-of-age than did the nation. This implies these states would have to spend a greater proportion of their funds for primary and secondary education than does the nation as a whole. It also suggests the region has a potential for continued population growth as the young mature and start their own families.

The working age population (eighteen- to sixty-four-years-of-age) for the region was a smaller proportion of the population than it was for the nation. Texas had the highest proportion of working age population in the region, followed by Alabama and Louisiana. The income potential of the region could have been placed at a disadvantage by the fact it had a smaller proportion of its population in the working age group, compared to that of the nation. The states in the region, except for Louisiana and Texas, had a higher proportion of persons at the typical retirement age of more than sixty-five years-of-age than did the nation. The population ratios of this age group in Louisiana and Texas were below the average for the nation.

States in this region, at least in the short-run, were at a a disadvantage with the rest of the nation in that they had the largest proportion of their populations in the non-labor force age groups (less than eighteen- and more than sixty-five-years-of-age). These states could improve their economic conditions, however, by providing good educations for their pre-labor force populations and by instituting programs to help retirees become active participants of an economically viable community, rather than simply drain the available resources. Furthermore, if the economies of the region's states do not expand, unemployment will become even more chronic among their young.

Income

The Gross National Product (GNP) provides a national barometer for the overall performance of the American economy. Total personal income is the figure most widely used to indicate the overall performance of state economies. Consequently, the rate of growth of total personal and per capita personal income provides information on the direction and magnitude of a state's economic development.

We discuss in this section total personal income, per capita personal income, distribution of income by two-digit Standard Industrial Classification (SIC) code, and other sources such as transfer payments. The distribution of income by industrial sectors provides an insight into the industrial structure of a state's economy. This means, for instance, that a change in the distribution of income over time is an indicator of the change in a state's industrial structure and provides valuable clues about the direction its industrial base is taking.

Table 3 gives the annual growth

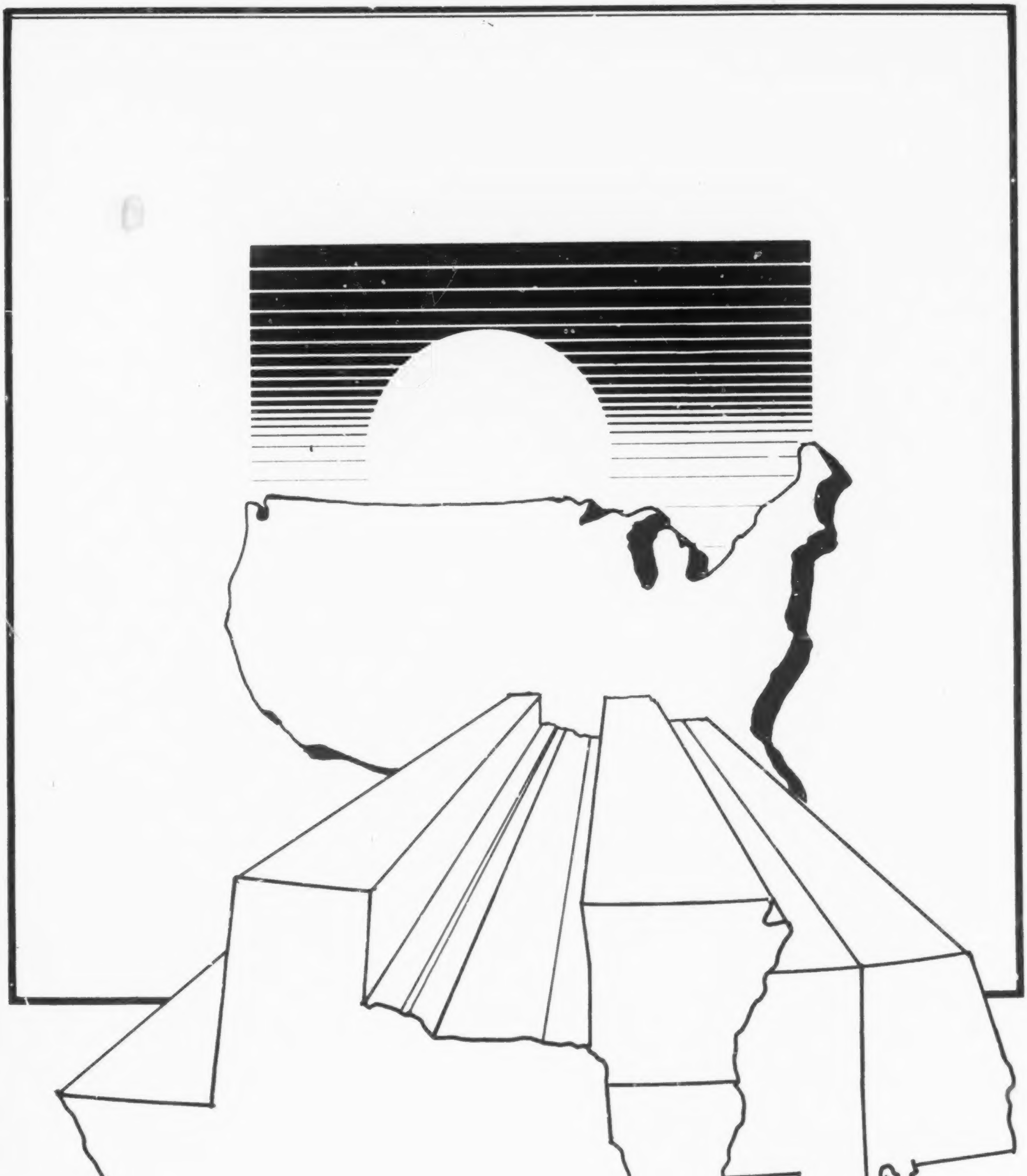


Table 1

Annual Growth Rates of Population in Percent Per Year

Year	U.S.	LA	TX	AR	MS	AL
1962-67	1.22	1.37	1.06	0.51	0.13	0.80
1967-72	1.13	0.99	2.10	1.20	0.70	0.47
1972-77	0.98	1.32	2.33	1.81	1.29	1.34
1977-82	1.05	1.67	2.98	0.75	0.73	0.83

Table 2

Population Distribution by Age Groups

Year	U.S.	LA	TX	AR	MS	AL
			0-5 Years			
1981	7.4	8.9	8.5	7.8	8.7	7.7
			5-17 Years			
1981	20.2	22.3	21.4	21.1	23.1	21.5
			18-64 Years			
1981	61.	59.2	60.5	57.2	56.5	59.3
			65 and Over			
1981	11.4	9.6	9.6	13.9	11.7	11.5

Source: U.S. Bureau of the Census, *Current Population Report Series*, p. 25.

Table 3

Annual Growth Rate of Total Personal Income (percent)

Year	U.S.	LA	TX	AR	MS	AL
1962-67	7.23	8.68	7.78	7.90	7.96	7.61
1967-72	8.66	8.05	9.78	9.73	10.15	9.37
1972-77	10.19	12.58	13.54	12.58	11.49	11.69
1977-82	10.88	13.46	14.53	10.25	10.20	10.12

Table 4

Annual Growth Rates Per-Capita Personal Income (percent)

Year	U.S.	LA	TX	AR	MS	AL
1962-67	5.94	7.21	6.64	7.35	8.12	6.77
1967-72	7.39	6.99	7.52	8.42	9.37	8.86
1972-77	9.12	11.12	10.96	10.58	10.07	10.22
1977-82	9.72	11.60	11.21	9.43	9.41	9.21
			Per Capita Income (dollars)			
1982	11,107	10,231	11,419	8,497	7,778	8,649

Table 5

Proportional Distribution of Personal Income by Industries (percent of total)

Year	U.S.	LA	TX	AR	MS	AL
			Manufacturing			
1970	21.90	13.79	16.21	19.26	19.76	23.0
1973	20.92	13.38	14.94	19.23	20.22	21.80
1977	19.98	13.68	16.04	19.80	20.81	21.54
1981	18.67	13.53	15.87	18.97	18.73	20.78
			Mining			
1970	0.79	4.51	2.57	0.65	0.94	0.79
1973	0.74	4.14	2.31	0.47	0.66	0.78
1977	1.17	5.75	4.18	0.83	1.23	1.41
1981	1.47	7.10	5.93	0.89	1.83	1.46
			Contract Construction			
1970	4.89	6.44	5.33	3.83	4.49	4.30
1973	4.98	6.25	5.41	4.14	4.55	5.70
1977	4.49	7.48	6.72	4.86	4.68	5.21
1981	4.08	7.67	6.08	4.00	4.63	3.84
			Trade			
1970	13.21	13.58	14.60	11.80	11.49	12.00
1973	12.81	13.59	14.50	11.54	11.18	11.99
1977	12.74	13.56	15.29	11.97	11.78	12.09
1981	11.85	12.54	14.19	10.89	10.99	10.60
			Finance, Insurance, and Real Estate			
1970	4.13	3.50	4.11	3.15	2.96	3.14
1973	4.08	3.52	4.23	3.08	2.90	3.13
1977	4.29	3.59	4.40	3.27	3.18	3.53
1981	4.25	3.34	4.18	2.95	3.06	3.13
			Transportation and Public Utilities			
1970	5.65	7.45	5.88	5.20	4.34	4.95
1973	5.66	7.29	5.99	5.22	4.48	5.13
1977	5.78	7.44	6.45	5.60	5.01	5.41
1981	5.63	7.76	6.19	5.76	5.07	5.46
			Service			
1970	12.08	11.34	11.61	9.50	10.51	10.88
1973	11.84	11.25	11.44	8.78	9.40	10.32
1977	12.60	11.74	12.35	9.55	9.79	9.67
1981	13.16	12.03	12.28	9.90	9.65	9.98
			Other Industries			
1970	0.23	0.31	0.24	0.43	0.29	0.20
1973	0.28	0.38	0.30	0.47	0.34	0.27
1977	0.32	0.31	0.36	0.34	0.29	0.28
1981	0.31	0.28	0.34	0.33	0.34	0.30
			Federal Government			
1970	5.66	5.07	7.62	4.62	6.93	9.34
1973	5.13	4.50	6.81	4.11	6.41	8.14
1977	4.45	3.43	5.04	3.68	5.28	6.78
1981	3.90	2.86	3.72	3.37	5.29	6.19
			State and Local Governments			
1970	8.24	8.96	7.28	6.98	8.22	7.82
1973	8.58	8.86	7.46	6.47	8.37	7.81
1977	8.77	9.31	8.45	7.54	9.20	8.63
1981	7.95	8.75	7.15	7.33	8.99	8.52
			Transfer Payments, etc.			
1970	23.22	25.05	24.56	34.60	30.02	23.60
1973	24.99	26.86	26.60	36.48	31.50	25.53
1977	25.43	23.73	20.70	32.57	28.75	25.47
1981	28.74	24.47	24.07	35.60	31.52	29.73

Source: Bureau of Economic Analysis

rates of the total personal income over five-year periods beginning in 1962. **Table 4** provides the annual growth rates of per capita income for the same periods as **Table 3** and the per capita income for 1982. The data shows Texas experienced the largest increase in total personal income, while Louisiana led the growth in per capita personal income. Both states exceeded the national in these two categories. The growth rates for total personal income in other three states were slightly below the national growth rates.

Texas' 1982 per capita income was the highest in the region, and it was the only state to exceed the national average. Louisiana was second with respect to personal income. Using personal income as a barometer of the states' economies between 1977 and 1982, Louisiana and Texas economic progress outperformed the national average, whereas the other three states lagged slightly behind the nation.

Table 5 offers a distribution of personal income by major industries and by other sources for selected years. The sectors covered in this study include manufacturing; contract construction; mining; transportation and public utilities; trade; finance, insurance, and real estate; services; and government.

The data shows that the fraction of income derived from manufacturing activities was lowest in Louisiana and followed by Texas, both of which were below the national average. The other three states all derived a higher portion of their personal income from manufacturing activities than did the nation. Income from mining was proportionally the highest in Louisiana, followed by Texas. Both were higher than the national average, reflecting the importance of the oil and gas extraction industry in these two states.

Contract construction activities provided a greater proportion of the total personal income in Louisiana than in the rest of the nation. The trade sector in Texas was relatively the largest for the region and was greater than the national average. The three other states had trade sectors proportionally smaller than those of the nation. The proportion of total personal income derived from the finance, insurance and real estate sector was smaller in this region than in the U.S. as a whole. Texas led the region in this sector, followed by Louisiana.

The transportation, communication and public utilities sector was larger in Louisiana than in Texas, and was proportionally larger in both states than in the nation. The service sector accounted for a smaller proportion of total personal income in this region than it did in the nation. Texas had the largest service sector in the region, followed by Louisiana. Federal government activities were most prominent in Alabama and Mississippi. This sector was the least significant in Louisiana. Except for Texas and Arkansas, state and local government activities were larger in the region than in the nation. Mississippi had the largest state and local government sector.

Farm income and other sources of income such as transfer payments, interest, and dividends were less prominent in Texas and Louisiana than in the nation. These sources were most significant in Arkansas, followed by Mississippi.

Texas in recent years has led the growth in manufacturing activities among the states discussed here, followed by Louisiana. The gains made by Arkansas and Alabama, though below Texas and Louisiana, were greater than those in the rest of the nation. Growth in mining activities in these states, other than Arkansas and Alabama, exceeded that of the nation. The gain was led by Texas, followed by Mississippi and Louisiana. Contract construction grew the most in Texas, followed by Louisiana, with both exceeding the national rates. Mississippi also had a similar growth rate greater than those of the nation.

The trade sector grew faster in Texas, followed by Louisiana, but the growth was greater than the national average. The average growth rates in this sector for the other three states were close to the national average. Texas lead the growth in the finance, insurance and real estate activities followed, once again, by Louisiana. In recent years this sector grew less in Arkansas and Alabama than in the nation. Texas led the growth in the transportation communication and public utilities sector.

The service sector grew fastest during the past decade in Texas and Louisiana. National growth rates in this category were trailed by the other three states in recent years. Most recently federal government activities grew most in Mississippi, followed by the growth in Louisiana. Except in Texas, the growth rates in the region exceeded the nation's, while the state and local government sector grew fastest in Louisiana. The growth in the three other states was greater than the national rates in recent years. The remaining sources of income grew fastest in Texas, with the other states generally following the national rates.

Most of the key industries in Louisiana enjoyed a healthy growth rate during the 1970s, but not all sectors are expected to maintain this trend. For example, as discussed thoroughly in David B. Johnson's arti-

Table 6

Total Nonagricultural Employment
(in thousands)

Year	U.S.	LA	TX	AR	MS	AL
1962	55,549	790.1	2,631.2	399.7	425.7	791.8
1967	65,803	997.3	3,259.4	501.0	535.1	951.8
1972	73,675	1,128.6	3,884.4	581.5	649.3	1,072.3
1977	82,471	1,364.6	4,906.8	695.6	765.9	1,269.2
1981	91,156	1,627.5	6,144.1	740.4	820.8	1,349.8

Source: Bureau of Labor Statistics, *Employment and Earnings*

Table 7

Growth Rate of Labor Force
(percent)

Year	U.S.	LA	TX	AR	MS	AL
1968-72	2.64	1.57	3.21	2.46	1.74	1.48
1972-77	2.62	1.56	3.53	2.92	2.27	2.42
1977-82	2.57	4.44	4.90	3.32	2.06	1.80

Table 8

Unemployment
(thousands) (percent)

Year	U.S.	LA	TX	AR	MS	AL
1968	2,800 (3.6)	65 (4.8)	117 (2.7)	30 (4.2)	36 (4.5)	58 (4.5)
1972	4,900 (5.6)	85 (5.9)	177 (3.6)	37 (4.7)	36 (4.2)	67 (4.9)
1977	7,000 (7.1)	109 (7.0)	310 (5.3)	60 (6.6)	71 (7.4)	114 (7.4)
1980	7,448 (7.1)	121 (6.7)	352 (5.2)	76 (7.6)	80 (17.5)	147 (8.8)
1982	10,678 (9.7)	240 (12.4)	572 (7.7)	107 (10.0)	155 (14.6)	209 (12.4)
Oct. 1983	9,886 (8.7)	210 (10.9)	663 (8.6)	95 (9.3)	117 (11.0)	218 (12.3)

Table 9

Growth Rate of Total Employment
(percent)

Year	U.S.	LA	TX	AR	MS	AL
1962-67	3.45	4.77	4.38	4.62	4.68	3.75
1967-72	2.28	2.50	3.57	3.02	3.94	2.41
1972-77	2.28	3.87	4.78	3.65	3.36	3.43
1977-81	2.53	4.50	5.78	1.57	1.75	1.55

Table 10

Percent of Union and Association
Membership to Labor Force

Year	U.S.	LA	TX	AR	MS	AL
1968	24.52	13.81	10.94	13.59	9.50	14.97
1972	25.56	14.02	11.59	13.09	10.27	16.46
1976	24.03	15.56	12.44	13.97	10.22	19.71
1980	26.95	14.23	9.88	11.90	---	17.72

Source: Bureau of Labor Statistics and Bureau of Economic Analysis

Table 11

Per Capita State Revenues
(dollars)

Year	U.S.	LA	TX	AR	MS	AL
1962	202.5	262.5	163.9	169.5	162.7	182.7
1967	309.0	372.8	235.6	279.8	286.8	280.51
1972	536.7	568.0	398.0	431.0	516.7	482.0
1977	930.0	917.6	670.6	710.9	825.6	825.8
1982	1,429.0	1,479.0	1,071.0	1,093.8	1,266.0	1,223.0

Source: *State Government Finance* and Bureau of Economic Analysis

cle in this issue, the state and local government sector is not expected to enjoy the growth rates experienced over the past ten years.

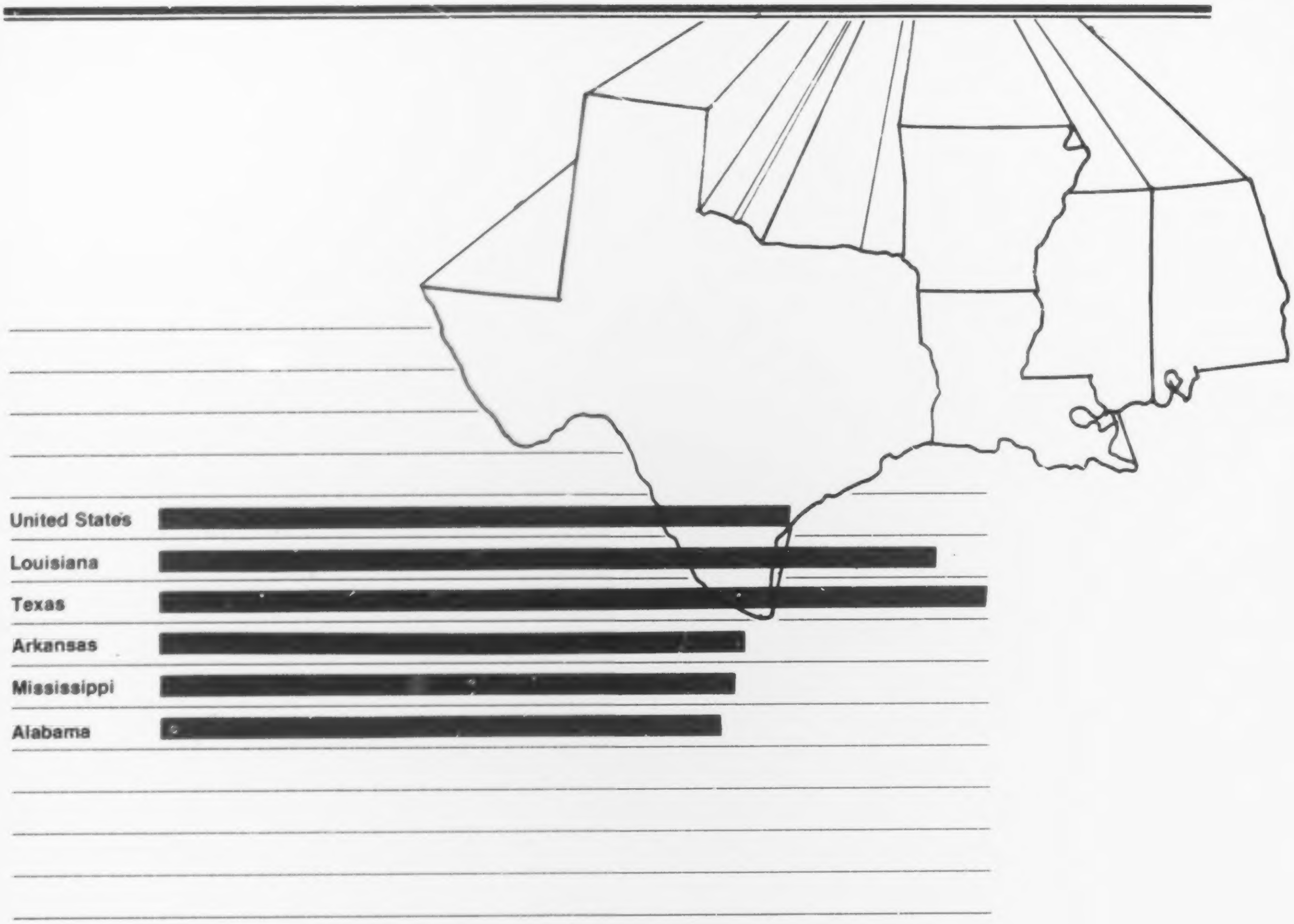
Employment

The purpose of this section is to provide a comparison between the labor force, the total employment, and the unemployment data. Anyone more than sixteen years-of-age, who is either working or actively seeking a job, is considered part of the labor force. Information regarding the growth and changes in the characteristics of the labor force is needed to examine the state's manpower resources. Knowledge of these changes will enhance the significance of the unemployment rate data. For instance, an increase in the unemployment rate does not necessarily imply negative economic conditions if, for instance, the increase is primarily due to an exceptional surge in the labor force, and particularly if total employment is also increasing. **Table 6** supplies the total employment for the states in the region and the U.S.

Table 7 gives the annual growth rate of the labor force for four-year periods beginning in 1968. Texas had the greatest growth rates during this period. Louisiana, along with Arkansas, trailed behind Texas in annual growth rates but were ahead of Alabama and Mississippi.

From 1977-1982, there was a rapid increase in the Louisiana labor force. This increase was partially due to normal growth in population, as the Louisiana baby boom of the 1950s entered the labor force; to a labor force migration from other states; and to a higher labor force participation rate. For instance, in 1977 the labor force participation rate was 57.8 percent and 62.4 percent in Louisiana and the United States respectively, but in 1980 the figures had changed to 60.1 and 63.8. One of the reasons Louisiana has had a relatively high unemployment rate is the large increase in the labor force during the 1977-82 period.

Table 8 shows the number of unemployed persons and, in parenthesis, the unemployment rate for the same periods as the labor force data. Texas consistently had a lower unemployment rate than the region and the nation. The other four states, including Louisiana, had unemployment rates in the



Annual Growth Rate of Total Personal Income (Percent) for the years of 1977 to 1982

1960s and 1970s that were generally below the national rate. In the first years of this decade the four states were experiencing unemployment rates higher than the national rate.

Table 9 gives the growth rate of total employment. Texas has experienced a remarkable increase in its labor, but its economy grew at such a rapid rate that it was able to absorb the new entrants into its labor force although that state—-especially its southeastern part—-has been experiencing some economic difficulties lately (due to petrochemical refining and oil patch decline, but the state average unemployment rate remains slightly below the national average).

Louisiana experienced an economic growth sufficient for absorbing the increase in its labor force during the 1960s and 1970s. During the past few years Louisiana's economy has not had sufficient economic development to absorb its growing labor force since 1980. Its unemployment rate remains about two percentage points above the national average.

One of the arguments often given for the economic development of the Sun Belt states is the low percentage of union membership. Although many factors determine economic development and union membership, the region's states have a relatively small percentage of their work force in labor unions. Texas and Mississippi have the lowest percentage of unionization, and Alabama and Louisiana have the highest in the region. Furthermore, based on the most recent data available (1980), unionization has been decreasing in all states in the region. **Table 10** gives the percentage of union and association membership to the labor force.

State Finances

State governments play a major role in the economic activities of the Louisiana. State revenues generally account for more than 10 percent of the total state income. Thus,it is important to analyze state finances and their impact on the economy.

State governments, unlike the federal government, do not have direct control over the money-creation process. Nor do they have an option to maintain continually large budget deficits. Consequently,

Table 12

Percent Distribution of State Revenue by Sources

Year	U.S.	LA	TX	AR	MS	AL
Federal Income						
1982	19.95	18.47	16.91	27.57	26.69	23.86
State and Local Governments						
1982	0.95	0.12	0.06	0.40	0.40	0.56
State Taxes						
1982	49.15	48.46	55.61	50.44	45.26	45.53
State Charges and Miscellaneous General Revenue						
1982	13.10	22.59	17.20	10.93	11.95	16.26
Insurance Trust Revenue						
1982	15.36	10.35	10.23	10.69	12.26	11.28
Liquor State Revenue						
1982	8.62	---	---	---	3.41	2.49

Table 13

Annual Growth Rates of State Revenues by Federal Sources and State Taxes (percent)

Year	U.S.	LA	TX	AR	MS	AL
Federal Sources						
1962-67	13.88	9.96	13.37	13.27	14.98	11.29
1967-72	14.50	9.74	14.15	9.83	13.34	13.35
1972-77	11.39	13.12	10.49	10.02	9.02	10.80
1977-82	7.52	4.27	6.02	8.43	8.28	5.64
State Sources						
1962-67	9.20	7.31	6.14	9.92	8.48	9.70
1967-72	13.40	9.88	14.00	10.13	13.81	11.11
1972-77	11.04	9.24	13.05	11.76	10.51	11.41
1977-82	9.98	12.71	13.89	9.53	8.57	9.36

Table 14

Percent Distribution of State Taxes by Major Sources

Year	U.S.	LA	TX	AR	MS	AL
Sales and Gross Receipts						
1962	58.55	47.63	57.77	71.19	73.17	73.68
1967	58.18	47.40	61.4	65.14	77.92	70.19
1972	55.54	50.41	70.1	60.51	76.70	68.83
1977	51.80	49.56	67.0	61.22	72.34	64.74
1982	48.45	45.48	62.6	53.80	67.10	61.07
Individual Income Taxes						
1962	13.27	3.92	Texas does	6.78	3.9	9.54
1967	15.37	6.02	not have	10.92	11.65	12.01
1972	21.71	9.50	a state	15.22	11.90	14.55
1977	25.22	7.80	income	20.45	13.62	18.59
1982	28.10	7.04	tax	28.01	11.49	21.90
Corp Net Income Taxes						
1962	6.36	4.74	Texas does	5.65	6.34	3.29
1967	6.98	4.93	not have	11.47	5.52	6.21
1972	7.37	7.24	a state	6.96	3.91	4.03
1977	9.08	5.53	income	8.35	4.75	3.28
1982	8.61	9.34	tax	7.28	4.86	3.23
License Fees						
1962	12.98	8.25	17.24	12.99	8.29	7.57
1967	11.35	7.68	15.49	16.06	8.12	6.42
1972	8.98	7.15	13.88	10.00	6.46	8.19
1977	7.07	7.16	11.62	7.73	10.32	7.12
1982	6.21	5.88	10.04	7.59	8.62	5.74
Property						
1962	3.11	3.30	4.13	0.23	1.95	4.93
1967	2.70	2.75	4.27	0.26	1.30	4.14
1972	2.11	2.62	2.41	0.22	0.48	3.06
1977	2.24	0.01	0.91	0.25	0.41	2.42
1982	1.91	-0-	0.02	0.40	0.34	2.09
Severance						
1962	2.19	31.13	18.85	2.82	5.37	0.33
1967	1.81	31.16	16.84	1.83	3.57	0.41
1972	1.27	22.08	12.13	1.09	2.38	0.37
1977	2.14	28.80	19.09	1.25	2.58	0.93
1982	4.81	31.40	26.14	2.37	8.00	5.33
Death and Gift						
1962	2.51	1.03	1.81	0.41	0.49	0.23
1967	2.49	0.87	2.02	0.31	0.65	0.41
1972	4.91	0.90	1.52	0.22	0.51	0.49
1977	1.79	1.16	1.41	0.62	0.52	0.28
1982	1.44	0.86	1.19	0.55	0.48	0.46

management of state finances will have a strong short-run effect on a state's economic outlook since revenues must match expenditures without the aid of additional money supply, as may be the case with the federal budget. We begin by first reviewing the total state revenue and its various sources for the states in the region and the nation.

Revenues

Table 11 gives the revenues per capita for the states in the region and nation. The data shows that not only did Louisiana have the largest per capita revenue in the region, but it generally exceeded the nation's average. The other four states were consistently below the average.

Some caveats need to be pointed out before attempting to analyze this data. First, the sources from which the revenue is obtained are important in analyzing the revenue's impact on a state's economy. For instance, if a large portion of the revenue comes from personal and corporate taxes, then high per capita revenues would imply a state's revenue was being obtained through local consumers and the business community. Should, on the other hand, large portions of a state's revenue come from severance taxes, as in Louisiana, then these would be obtained by taxing the out-of-state users of its natural resources. In the latter case, the burden of financing the state's revenues would be shared by out-of-state users—at least in the short-run.

Another caution to be observed in analyzing the impact of a state's revenues on its economy concerns the size of state government relative to that of local governments. For example, a higher per capita state revenue may be expected from a state where government economic activity is relatively larger at the state level than in a state with proportionally larger local governments. Louisiana had larger state government economic activities versus local government economic activities than did the nation. This may explain in part why Louisiana had a higher per capita state revenue than the U.S.

We now turn to examining various state revenue sources. **Table 12** lists the distribution of state revenues by major sources in 1982. Four major revenue sources are discussed here, including intra-government revenues, state taxes, charges and miscellaneous revenues, and others.

The data shows that in 1982 Louisiana and Texas obtained a smaller fraction of their state revenues from federal and local government sources than did the U.S. on the average. This was a reversal from the past, when a greater fraction of the revenues came from federal sources. The remaining three states continue to receive a greater fraction of their revenues from intra-government sources than did the other states in the nation, although the proportions have been decreasing in recent years.

From **Table 12** we learn that both Louisiana and Texas have depended more on internal sources, such as state taxes and charges and miscellaneous general revenues, than did the other three states or the national average. However, a closer look at state taxes reveals Louisiana was generally closer to the national average than was Texas. Finally, the other sources, such as insurance trust revenues and liquor revenues, were generally lower for the states under examination than for the national average.

Table 13 presents only the growth rate of state revenue from federal sources and state taxes, as they were primarily the two main revenue sources. Louisiana, Texas, and Alabama all have recently experienced rapidly declining shares of the state revenues from federal sources. Arkansas and Mississippi have also experienced a decrease in revenues from federal sources, although they have maintained growth rates above the national average. Arkansas and Mississippi had growth rates in their state taxes close to those of the national average but below their own previous growth rates. Texas and Louisiana, however, had revenue growth rates which not only exceeded the nation but were greater than in the past.

The rapid increase in state taxes for both Louisiana and Texas requires us to take a closer look at this revenue source. To do this we discuss the following breakdown of state taxes: sales and gross receipts, individual income tax, corporate taxes, license, property, severance, and other.

Table 14 provides a distribution of state taxes from the major sources. The data shows there was great variability of distribution of the sources across the states. Tax revenues from sales and gross receipts are not a very good barometer of economic activity in the state. Due to the different tax structures across and within the states, it is difficult to discern whether or not larger figures reflect greater sales or if they reflect a higher tax schedule. However, it is interesting to note that Louisiana consistently maintained a smaller portion of its state revenues from this source than did the other states or the nation.

State revenue from individual income taxes and corporate taxes is an important barometer in that it reflects the reliance the state places on the local consumer and the business community. A high dependency on this revenue source curtails economic activities because, unlike some other taxes, it is generated exclusively by eliminating funds for purchasing otherwise available to the state's private sector. Texas has neither of the above taxes, and Louisiana remains well below the national average in both categories. Arkansas, Mississippi, and Alabama also remain below the national average with respect to individual income taxes, but remained mixed with respect to corporate income taxes.

The license tax revenue source includes a variety of components such as automobile licenses, business licenses, and hunting licenses. The variety of licensing tax schedules across and within the states does not allow for a clear interpretation of these figures. However, it is worth noting that Louisiana and Alabama had a smaller dependency on this source than did the nation.

Property tax, as **Table 14** indicates, is no longer an important source of income for the State of Louisiana. Its most significant tax revenue, aside from sales and gross receipts, was the severance tax. In fact, Louisiana and Texas accounted for the largest fraction of the severance tax revenues in the nation. Revenue from this source is not expected to grow as rapidly in Louisiana as it did in the past decade. Alternative sources of revenue will have to be found to compensate for the diminishing contribution from this source.

In the preceding section we discussed trends of the various state revenue sources. It is now appropriate to examine what the states being discussed here have done with this money.

Table 15

Annual Growth Rates of Per Capita State Expenditures (percent)

Year	U.S.	LA	TX	AR	MS	AL
1962-67	8.65	8.40	8.47	10.44	8.89	9.26
1967-72	11.97	7.12	10.84	7.80	12.77	10.11
1972-77	10.76	10.11	10.03	12.06	9.66	10.73
1977-82	9.02	10.29	9.30	8.99	8.80	8.59

Source: State Government Finances and Bureau of Economic Analysis

Table 16

Per Capita—State and Local Education Expenditures on 5-20 Age Group

Year	U.S.	LA	TX	AR	MS	AL
1967	616.09	537.42	522.35	434.79	379.20	476.83
1970	832.75	609.27	674.13	573.32	568.46	614.80
1976	1,555.66	1,206.44	1,427.25	1,208.32	1,146.98	1,237.90
1980	2,131.66	1,845.84	2,225.42	1,804.49	1,697.58	1,820.00

Table 17

Price of Natural Gas by Type of User ($ 1000 cft)

Year	U.S.	LA	TX	AR	MS	AL
			Residential Gas Prices			
1965	1.01	0.72	1.11	0.75	0.87	0.80
1970	1.06	0.75	1.10	0.78	0.88	0.92
1975	1.69	1.32	1.72	1.12	1.41	1.47
1980	3.61	3.07	4.10	2.36	3.39	3.30
1982	4.97	4.87	5.24	3.73	4.72	5.08
			Industrial Gas Prices			
1976	1.32	1.05	0.98	0.82	1.07	1.52
1978	1.91	1.65	1.66	1.33	1.64	2.13
1980	2.81	2.23	2.72	1.79	2.54	2.53
1982	3.97	3.44	3.88	3.17	3.60	3.70

Source: American Gas Association, *Gas Facts*

Table 18

Price of Electricity by Type of User

Year	U.S.	LA	TX	AR	MS	AL
			Residential (1,000 kwh)			
1973	21.85	19.79	18.44	18.95	16.67	18.39
1976	34.85	25.62	26.47	27.24	30.94	29.27
1979	43.12	32.74	36.39	33.56	35.67	37.59
1983	69.96	57.73	60.25	54.68	57.57	64.24
			Industrial (1,000 kw—200,000 kwh)			
1973	4,402	3,025	4,055	3,599	3,392	3,010
1976	7,395	5,627	5,599	5,605	6,430	5,167
1979	9,408	6,359	7,736	6,194	7,153	8,025
1983	15,097	10,371	11,912	8,868	10,751	12,236

Source: Energy Information Administration, *Typical Electricity Bills*

Table 19

Cargo Through Ports (million pounds)

Year	Hous.	Galv.	Pasc.	Mob.	B.R.	N.O.
1962	13,269	7,274	2,369	3,182	8,556	17,662
1967	6,710	4,129	6,167	3,747	10,453	24,747
1970	24,511	4,248	2,584	5,881	13,516	30,737
1978	40,100	7,836	7,687	9,703	22,884	34,455
1981	45,638	26,250	4,566	13,610	28,746	74,158
1982	44,373	3,995	11,260	8,144	16,415	36,508

Source: *U.S. Waterborne Exports and General Imports*, Bureau of Census

Table 20

Value of Cargo Passing Through Ports (million dollars)

Year	Hous.	Galv.	Pasc.	Mob.	B.R.	N.O.
1962	865	380	64	142	265	1,160
1967	1,324	313	198	196	325	1,545
1970	1,636	300	89	265	459	2,069
1978	7,223	1,139	490	918	1,927	5,180
1981	13,066	3,726	581	1,320	2,505	10,150
1982	10,586	997	1,281	554	1,238	5,991

Source: Bureau of Census, *U.S. Waterborne Exports and General Imports*

In **Table 15** the growth in per capita state expenditures is shown. Note that the per capita state expenditures grew faster in Louisiana during 1977-82 than in the other states in the region and faster than the national average. Among the other states only Texas exceeded the nation's growth rate between 1977 and 1982. Louisiana's 1982 expenditures exceeded the rate of growth of state's revenues, which reflects the impact of the recession. As a result of the recession, the growth rate of expenditures is expected to drop below the national average in 1983. Unless the state's economic recovery in 1984 is strong, or tax increases are made, state expenditures will not grow at the rate experienced during the past decade.

Table 16 gives the state and local educational expenditures for each person in the school and college age group. The data shows that only in Texas did the expenditures in 1982 exceed the national average. In Louisiana this expenditure has been below the national average.

Energy Prices

Energy prices are an important determinant of the industrial activities in a state. Some industries, such as chemicals, are not only energy-intensive but use natural gas as a chemical feedstock. In this section, we analyze price trends of natural gas and electricity as they apply to residential and industrial users.

Table 17 shows the price of natural gas to residential and industrial users. The data shows that although Louisiana and Texas are the major producers of natural gas in the region, the prices for the residential consumers in these states was approximately the same as they were nationally in 1982. The residential-use price in Arkansas was lowest in the region, followed by the price in Mississippi. The price of natural gas to the industrial consumers in Arkansas was the lowest in the region, followed by the price in Louisiana in 1982. Prices in all the states of the region were generally below the U.S. price.

Table 18 gives the price of electricity for a 1000-kwh residential user as well as for a 1000-2000-kwh industrial user. The data shows the price of electricity to the residential consumers grew unevenly in the states being considered. In January of 1983, the price of electricity for residential users was below the national average in all the states. The prices in Texas, the highest in the region, were approximately 8.2 percent below the national prices.

The cost of electricity to industrial consumers was lower in the region compared to the national prices. Electricity prices for industrial users was the lowest in Arkansas, with the prices in Louisiana being the next lowest. Louisiana industries have benefited from relatively low electricity prices in the past. The task for the regulators now is to assure the availability of electricity at stable prices without jeopardizing the financial standing of the utilities.

Ports

Louisiana, with its slightly more than 6,900 miles of navigable waterways and Gulf of Mexico location, has five deep-water ports. The importance of ports to Louisiana was pointed out by a study conducted by Viana Maritime Systems, Inc., in which it was estimated in June 1980 that the Port of New Orleans, whether directly or indirectly, generated 110,000 jobs, $1.2 billion in personal income, $143 million in tax revenues, and $5.6 billion in the sale of goods and services for the state.

We compare in this section the growth of two of Louisiana's ports (New Orleans and Baton Rouge) to two ports in Texas (Houston and Galveston), one port in Alabama (Mobile), and one in Mississippi (Pascagoula). Two different measures of port activity are given. One measurement is the total weight of shipping, and the other is the value of shipments. **Table 19 provides the weight of the shipments in millions of** pounds, while **Table 20** supplies the value of shipments in millions of dollars.

Houston was the largest 1982 port of the six presented in the table in terms of value and weight of shipping. This was a change since New Orleans led in 1981 in terms of volume. It should be noted that the figures here are presented only for the ports and not the custom district.

Conclusion

In this article we have surveyed the economies of Louisiana and other states in the region vis-a-vis the U.S. economy. Our analysis showed that in recent years Louisiana, along with Texas, outperformed the nation in economic progress. In the case of Louisiana, and to a lesser extent in Texas, energy related industries were major contributors in providing employment and income in these states. Louisiana's severance taxes from oil and gas extraction added to the state's coffers enabling it to keep other taxes low relative to the national average.

Severance taxes are not expected to retain the growth rates experienced in the past decade. Louisiana will have to find alternative revenue sources in order to maintain its current level of governmental activities. It is worth noting that for each person in the school and college age group, Louisiana spent less than the nation or most of the states in the region. No definite conclusions can, however, be based on this information since other factors such as private expenditures on education affect the public expenditures.

The price of natural gas and electricity for industries were among the lowest in Louisiana. This helped attract energy-intensive industries to the state. Recent indications suggest the state might lose this advantage.

Port activities have been an important source of income and employment in Louisiana. It is hoped that Louisiana will continue to benefit from increasing domestic and international activities in this sector.

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NATIONAL NEWS

National News
1984 Spending to Fuel Recovery

The Southeast's economy generally should grow faster than the rest of the nation's in 1984, with the strongest rebounds expected in the production of goods for consumers and for national defense, according to a Federal Reserve Bank of Atlanta analysis.

Increased numbers of new residents moving into the region next year will boost spending on housing and durable consumer goods while augmenting employment in the services industries in regional states such as Florida and Georgia. Other sections of the Southeast will benefit as business investment grows. Plants should continue reopening, and the job outlook should improve as long as consumer and business spending fuel the national recovery.

Florida's economic growth appears likely to pace the region over the new year, but the benefits of revived growth should be widespread across the southeastern states. Virtually all sectors show promise for 1984 despite continued high unemployment and other lingering woes from the recession in hard-hit Alabama, Louisiana, and Mississippi. Those states, as well as Tennessee, should benefit from manufacturing plant reopenings and increased mining, according to the analysis, which adds: "if the national economy sustains its strong first-year advance in the second year of recovery, these states could show sharp employment gains in 1984. That would mean that virtually all states in the region would grow at a healthy pace over the year."

Owners Earn More in South

Southern small business owners earn more than those elsewhere in the nation, according to a study conducted by Geneva Corporation, a firm specializing in mergers and acquisitions of firms valued at less than $50 million. Southern small business owners are the highest paid of any region in the United States, in terms of both actual salary level and amount of total compensation, with an average direct salary of $112,000 and another $29,000 in indirect compensation. Total owner compensation in the South, however, is only 2.8 percent of company revenues. This, along with the Southwest, represents the lowest figure for all regions and is below the national average of 3.4 percent.

Southern company revenue levels, at nearly $5 million, also are higher than those in the Northeast, Southwest, Midwest, and West. Of the three industries studied, southern service business owners receive the highest total compenstation, $190,000—twice the amount that wholesale business owners are making. Indirect compensation accounts for $54,000, giving this group the greatest amount of indirect compensation for service, manufacturing, and wholesale enterprises throughout the nation.

Only 1.9 percent of company revenues is used for owner compensation in wholesale business, while service companies in the South are allocating 5 percent of revenues for owner compensation. Comparing the three industries in each of the five regions studied, Southern wholesalers allocate the least amount of company revenues for owner compensation.

This owner's compensation study is a preview excerpt of a complete survey by Geneva Corporation which will include financial ratios, liquidity, and revenue performance results. Copies of the complete *Geneva Index* will be available about March 30, at a pre-publication price of $395, through Geneva Corporation, Dept. SES, 2923 Pullman Ave., Santa Ana, CA 92705.

Full Health Protection

The Department of Labor's Occupational Safety and Health Administration (OSHA) has announced a new policy to encourage development of employee health protection programs in each of the nation's millions of workplaces.

"Under the new policy, these comprehensive health programs, tailored to the needs of individual worksites, will play a key role in preventing job-related illnesses," Assistant Secretary of Labor Thorne G. Auchter, head of OSHA, says. OSHA plans to implement the program early this year.

Housing Forecast Is Optimistic

A five-year housing forecast developed by the National Association of Home Builders puts a bright face on the future. NAHB sees a continued housing recovery into 1984, a slight downturn in 1985, then a relatively stable period for 1986-1988 with mild cyclical changes. Housing starts are expected to average 1.724 million units over the next five years, ranging from a low of 1.53 million in 1985 to a high of 1.86 in 1987. Nearly 50 percent of these units will be built in the South, with Dixie starts reaching 930,000 units in 1987.

The economic assumptions underpinning NAHB's forecast show real GNP growth averaging 3.75 percent over the 1983-88 period, the consumer price index averaging 5.2 percent, the unemployment rate high but dropping to 7.5 percent in 1988, and interest rates high by historical standards in the face of continuing federal deficits, although a 10-percent prime rate is expected by 1988. Housing starts forecast for each year in millions of units are 1.685, 1984; 1.53, 1985; 1.75, 1986; 1.86, 1987; and 1.83, 1988.

Wiley Publishes First Magazine

Publishers John Wiley & Sons, Inc. announces the launching of *PROFESSIONAL COMPUTING: The Authoriative Source for Hewlett-Packard PC Users*, with a premier issue cover date of April/May 1984. The first magazine specifically designed for people who buy and use Hewlett-Packard personal computer systems, it is also the first magazine published by Wiley in its 176-year history. It initially will be published bi-monthly.

Relief for the Jobless

Fast growth in the Southeast's economy will help those dislocated from their jobs during the 1981-1982 recession find alternative work more quickly than the rest of the nation's workers, according to a Federal Reserve Bank of Atlanta study.

The survey finds the problem of the displaced worker, while very real in the Southeast, less severe than it is nationally. Although dislocated workers make up a small share of the Southeast's workforce, they account for a large percentage of the region's unemployed.

"A major conclusion suggested by available labor market information is that job losers from declining industries account for one-third of all job losers nationally and in the South," according to the survey. "In the south, these unemployed are most likely to be former textile and apparel workers."

Growth expected with the continuing recovery of the economy should create alternative employment, particularly in the service sector, to replace jobs lost in the closing of the Southeast's textile mills and apparel factories. Service sector jobs are expected to account for one out of three new jobs in the Southeast during the 1990s.

Federal training programs should help southern workers acquire the new skills to qualify for those jobs, say Atlanta Fed researchers. The major responsibility for helping dislocated workers has fallen on the public sector because private firms have little economic incentive to retrain workers they have released permanently.

The Federal Job Traning Partnership Act of 1982 gave southeastern states $13.3 million in training funds for the fiscal year that ended September 30. For fiscal year 1984, the region could gain an additional $27 million based on President Reagan's budget request, the act's funding formula and states' unemployment as of mid-1983.

As of mid-September, three southeastern states—Alabama, Mississippi and Florida—had received approval for projects totaling $1.9 million. Other states in the region may receive an additional $2.2 million in discretionary funds in fiscal 1983. These funds represent a total of 14.8 percent of the secretary of labor's discretionary funds pool.

Losing the 'House'

The continuing economic recovery and improving financial condition of many companies has pushed the payment performance of U.S. business to a three-year high; but, on the other side, even a Las Vegas hotel, feeling down on its luck from the high roll of Atlantic City gambling, has sought protection from its creditors.

"External factors like high interest rates and the downturn in the economy accelerated the trend toward bankruptcy filings by larger companies," says Coopers and Lybrand's Ron Maskalunas, Chicago-based partner, who heads the business investigation services group in the Midwest. "Now that we're coming out of the recession, the trend should decrease," he adds, explaining, "Lenders and creditors certainly want to avoid bankruptcies as much as possible. They lose a customer, and administrative costs eat up much of the estate. And it's a management drain for a company. People spend their time on bankruptcy administrative procedures, rather than working to improve growth."

Several bills for reforming or revising the code are pending on Capitol Hill. From a consumer's point of view, the most far reaching is S445, sponsored by Sen. Robert Dole (R-Kan). Under this bill, when a consumer files for Chapter 7 bankruptcy, the court would appoint a trustee to administer the estate. The trustee would be required to tell the debtor his opinions without pressuring him into taking any specific one. The bill would also allow a judge to dismiss the bankruptcy case if he felt it was unwarranted or that cancelling a debtor's debts would amount to a "substantial abuse."

Interstate Banking

Eliminating prohibitions against interstate banking would generate greater competition and reduce banks' profitability within markets, say Federal Reserve Bank of Atlanta economists; "but," they add, "the proposed change could mean lower costs for banking consumers.

"If geographic barriers to interstate banking are removed, links among banking organizations nationwide may increase. To the extent that our findings in Florida may be applicable across the nation, banking competition would increase," the economists say in the January issue of the *Economic Review*.

The study's major implication is that removal of the interstate banking prohibitions would increase competition in markets throughout the nation, reducing bank profits within those markets. However, the economists conclude, increased competition would lower the cost of banking services for the public.

S.S. for Government Employees

State and local government employees may be covered under Social Security by means of voluntary agreements entered into by the states with the secretary of Health and Human Services. Some states provide coverage for most employees while other states provide coverage for only a few employees. Before the enactment of the Social Security Admendments of 1983, states could terminate coverage. However, to do so, they were required to give two years' advance written notice of their intent to terminate, and only when coverage had been in effect for at least five years. The Social Security Admendments of 1983 prohibit states from terminating coverage of state an local employees. ■

by Randall M. Evanson

FORUM

Control of Strategic Goods and Technology

International traders traditionally have faced complications not present in the domestic marketplace such as tariffs, quotas, currency controls, and different laws and measurements. The adept have coped, met demand, and earned profits. Nevertheless, despite the importance of trade in a world of specialization and scarce natural resources, noneconomic barriers are formidable. Increasingly political, they challenge entrepreneurs possessing acumen in business affairs but unease in the political arena. One particular problem of this nature affecting United States international trade is the restricted export of strategic goods and technology.

A bewildering and murky array of laws, directives, precedents and changing policies lurks in the foggy area of *strategic* goods. Various public groups exercise overlapping authority, such as the U.S. Department of Commerce Office of Export Administration and Bureau of East-West Trade; the Department of Defense Office of Strategic Trade; the Department of State's involvement with the Western Allies' Coordinating Committee; the Department of Justice's enforcement of antitrust, antiboycott, and corrupt practice laws; Congressional committees; White House policy makers; and regulatory agencies.

If this were simply a matter of negotiating a maze to obtain irrevocable export licenses, one might chart the way and expect familiarity to make successive voyages less vexing. Unfortunately, the labyrinth is in constant flux, so precedents offer little comfort. Ebb and flow of detente, balance of payments considerations, political philosophies and technological complexities make each excursion a venture into the unknown. One frustrating aspect of this lack of clarity is the trader's difficulty in securing ironclad approvals, for reversal of governmental decisions is always a possibility.

Sanctions on technology transfer received a great deal of publicity in 1982, as President Reagan decreed contracts to supply American goods or technology for the Soviet gas pipeline to Western Europe were not to be fulfilled, imposed penalties on firms violating his order, and then finally revoked his revocations. Allied governments were at odds over pipeline construction and financing and the extraterritoriality of the Presidential decree.

These sanctions involved such international firms as Dresser France, Alsthom-Atlantique (subsidiary of Cie. Generale d'Electricite), Nuovo Pignone, John Brown Engineering, Mannesmann Anlagenbau, and AEG-Kanis Turbinenfabrik (subsidiary of AEG Telefunken). American firms with technology used in manufacturing the compressors, General Electric and Dresser Industries, were caught in the political crossfire. In addition to the American, French, British, Italian and German companies faced with the choice of sanctions or costly court judgments for nonfulfilment of contracts, Belgian and Japanese firms were nearly drawn into the fray.

Arguments against the pipeline are persuasive. Western allies are lending capital at below-market rates (subsidized by their taxpayers) to the foreign-exchange-poor Soviets (relieving pressure on their military adventurism) to build a pipeline (largely with prison labor from Southeast Asia and the Gulag Archipelago) making Western Europe dependent upon Soviet gas to be delivered at above-market prices (paid by Western European taxpaying consumers). Its tangential effects will siphon capital from the Free World (maintaining higher interest rates), retarding exploitation of alternative gas supplies from the Norwegian shelf, Canadian Arctic, Argentine and Chilean waters, and West Africa, and discouraging construction of a West European pipeline grid that would be more flexible and less vulnerable to an interrupted flow from a single source.

Despite these arguments, the West Europeans have opted for the pipeline to boost employment and to pursue the thesis East-West economic ties further detente and a nourished Soviet giant is less dangerous than a hungry one. One cannot blame the profit-seeking Western corporate managers for doing business within the parameters of their nations' policies. A dilemma of cold war business strategies pinched these firms in a political vise. The indefensible European decision to agree to the pipeline deal in the first place was counterbalanced by the legally untenable American position that both foreign and U.S. companies should forego profits and break existing contracts in defiance of both commercial law and European governmental policies.

This is not the only instance of international business caught in the web of cold war policies. Dresser Industries also was enmeshed in controversy over building the Russians a factory for deep-well rock drill bits. Issues arose over tungsten carbide metallurgy, computerized electron-beam welding, and the plant's capacity—enough to make the Soviets more competitive in world petroleum exploration and recovery. There was disagreement whether comparable technology was available elsewhere, and if so, how long the Russians might be delayed in acquiring it. The licensing process lasted five years.

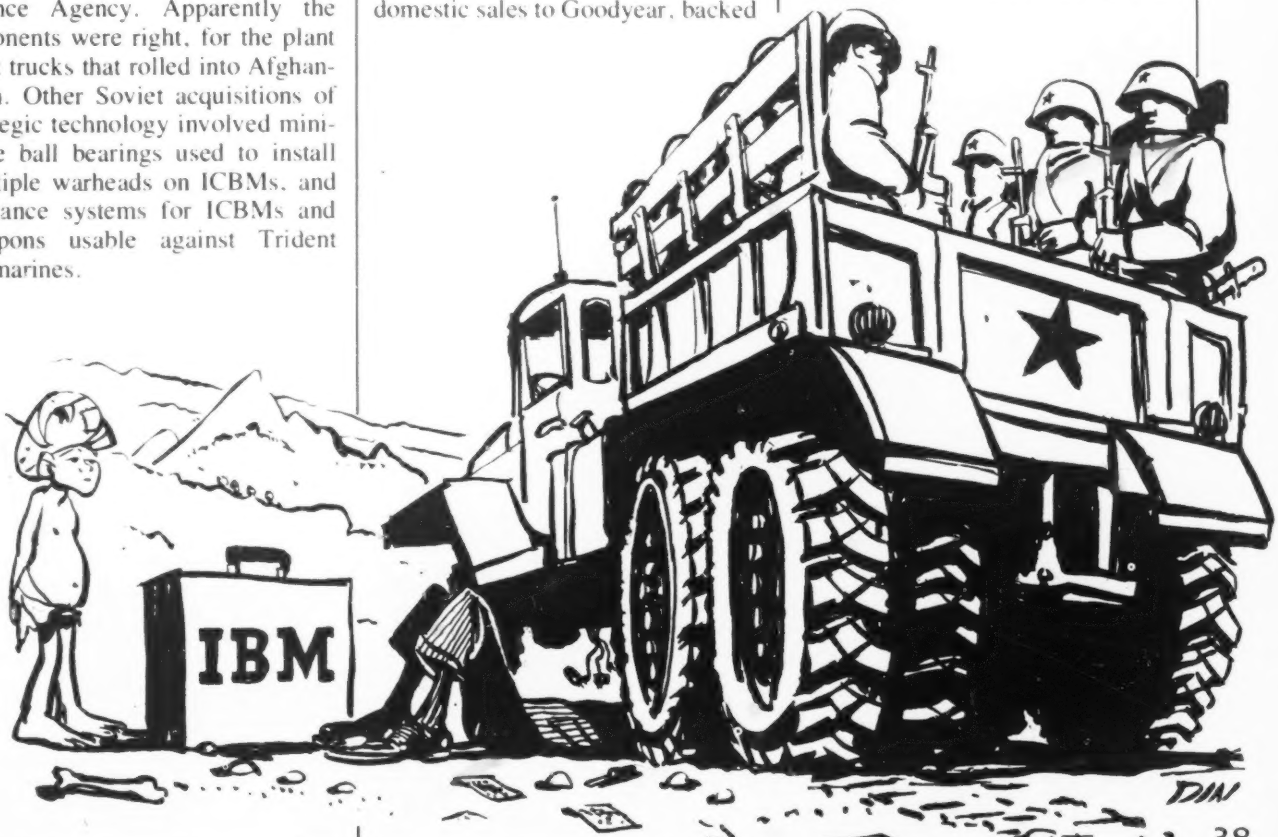
A well-publicized debate over building the Kama River diesel truck plant, involving European and Japanese as well as American technology, ended in the Department of Commerce's prevailing over Defense and the Central Intelligence Agency. Apparently the opponents were right, for the plant built trucks that rolled into Afghanistan. Other Soviet acquisitions of strategic technology involved miniature ball bearings used to install multiple warheads on ICBMs, and guidance systems for ICBMs and weapons usable against Trident submarines.

The case for safeguarding Western technology is convincing. The parallel argument against granting the enemy credit is equally persuasive: the Kama River plant was build with an Export-Import Bank loan of $153,950,000, surpassing Lenin's remark that capitalists would sell the rope for their own hanging by lending the money to buy the rope.

The issue of technology sales to the enemy is not of recent origin. In 1964, when Washington hoped to wean Soviet satellites away from total dependence on the USSR, Goodyear obtained a license to build a synthetic rubber plant in Rumania. The company had second thoughts about transferring this technology behind the Iron Curtain, however, and withdrew. Firestone then agreed to sell Rumania a polybutadiene rubber factory. This provoked protests and demonstrations by Young Americans for Freedom. The protests were so intense that Firestone, losing domestic sales to Goodyear, backed out. Clear sailing in the licensing channel was not enough in this case, for public opinion, via a boycott, torpedoed the project.

Another instance of such sanctioning occurred when the Fruehauf Company's French subsidiary once arranged to sell sixty trailers to Communist China in 1965. The U.S. government forbade the sale, but French minority partners sued, got temporary control of Fruehauf-France, and sold the trailers. Washington suffered a policy defeat, the Chinese got their equipment, and Fruehauf lost $750,000.

An Oshkosh Truck contract with Libya was approved by the Department of Commerce and twice reaffirmed. The company invested millions to gear up for production, then was stunned by White House reversal on grounds that Libya might use the vehicles militarily. After much debate, an



about-face allowed delivery of the trucks. Sure enough, they were used to invade Chad.

In the Oshkosh Truck case, the company employed two classic weapons: political influence (the Wisconsin Congressional delegation) and the argument that "if we don't sell the goods, someone else will." This apparently pusillanimous reasoning has validity in a world of many countries and companies. Permanent blockage of technology transfer may be impossible, for R&D are no nation's monopoly and industrial espionage is an ancient art. History offers countless cases of political steps to curtail trade, most of them unsuccessful.

Americans can find examples of such national policy failures in their own colonial history, when British Crown mercantilist restrictions impinged upon all sorts of trade, particularly with rival nations. Violation of the Navigation Acts was so pervasive, however, that the most common coin in the thirteen colonies was the Spanish piece-of-eight, ipso facto evidence of unlawful commerce.

British laws against technology export during the Industrial Revolution also were inadequate. America's first modern textile mill was designed by Samuel Slater, an illegal emigre who had memorized English industrial secrets. The French smuggled mulberry seeds and silkworms out of China: and a Briton slipped long-staple cotton seeds out of Egypt.

In the 20th century, the *nuclear club*, once a trio, now is a sextet. Proliferation of nuclear power plants ensures that membership will grow. International sanctions against Rhodesia failed to halt trade in oil, armaments or anything else: the regime lasted fourteen years, and its demise was due not to economic constraints but to military and political pressures.

Failures to control commerce abound. Trade in rhino horn and ivory flourishes; Russians and Chinese with impunity ignore copyright and royalty conventions; *samizdat* publications circulate in the USSR; Libya, via third parties, has acquired several C-5A transports. Miami banks bulge with narcotics money; and if the Mafia filed reports, it is estimated that sales would merit twenty-eighth place in *Fortune's 500*.

The conclusion: commerce will flow despite efforts to stifle it. In some ways this is disheartening. Will poachers kill the last leopard? Are drugs a permanent epidemic? Are patents and copyrights meaningless? Will American R&D always find application in the USSR? On the other hand, it is comforting to know that individual initiative is not infinitely secondary to political dictates.

Businessmen and governmental policy makers should learn from the evidence that constraints on trade will likely have only temporary effects. Entrepreneurial ingenuity will spawn Triangular Trade, bathtub gin, numbered bank accounts, and industrial espionage. Sooner or later, goods and know-how will cross frontiers.

This does not mean governments should surrender and let the world become a grand bazaar for armaments, radioactive materials, blueprints, and drugs. Civilization has come too far for that. Both public officials and corporate managers must be forever wary of the ultimate use of hard-won engineering and scientific breakthroughs. Some feel that, given the implications of Soviet imperialism, the West should sell them nothing that is not obsolete, defective or contaminated, and preferably overpriced. Patriotism notwithstanding, such control is impossible. Third parties will transfer know-how. Still, restrictions can retard the transfer and impose added costs on the enemy's catching up.

The embargo on further use of American technology in pipeline compressor station turbines has had an effect. Existing contracts and pre-embargo acquisitions provide only sixty-three rotor components, and the Soviets need one hundred twenty-five. Substitution of clusters of smaller Russian turbines will cost more and require their diversion from other projects. Reduction of the number of compressors also will reduce maximal gas flow. These factors indicate the likelihood of a year's delay in the project's completion. The Reagan administration's efforts are not doomed to total ineffectiveness.

Trade restrictions also can increase the costs of nontechnical goods, as illustrated by the OPEC embargo—oil still found its way to market, although at a higher price. President Carter's grain embargo failed to prevent world markets from meeting Soviet demand, but it caused delays (hence livestock reduction and Russian market dislocations) and pushed Soviet grain costs up an estimated 30 percent. Furthermore, the original agreement to sell grain to the USSR also caused dislocations and inflation in the American economy, suggesting that governmental manipulation is less efficacious than Adam Smith's invisible hand.

After-the-fact policy changes are intolerable; however, if the firms involved in the pipeline controversy had reneged on their contracts, up to $50 million in penalties might have been imposed. The affair threatened General Electric's $175 million contract, as well as the reputation of American firms.

Earlier policy zigzags have led Britain and France to enact laws protecting their interests from application of U.S. antitrust laws; and the French courts have upheld the inviolability of French soverignity in cases of American claims of extraterritoriality via American corporate enterprises. Europeans regard these efforts as bullying, insulting, and illegal, to the point of there being a growing reluctance to enter into agreements with American firms.

A similar controversy is brewing in the Far East, where a joint Russian-Japanese oil-drilling venture off Sakhalin Island is jeopardized by a United States embargo on using data-logging equipment under American license, as is a billion-dollar sale to the Soviets of Japanese pipeline with American-licensed valves and pipe-fastening technique. Meanwhile the *Gulag gas* issue grows as the USSR negotiates for West European loans and technology for a pipeline from the Astrakhan fields to tie into the line from Urengoy to the West.

This tug of war between Washington and its allies encourages additional Japanese and European R&D to reduce future dependence upon American technology. It comes on top of an existing French program of gargantuan R&D investment aimed at gaining technological leadership and independence of foreign economical and political pressures. Continued wrangling could hurt the West in general, and the United States in particular, if it provokes discord in meeting the Soviet challenge, competitive giveaways of advanced technology, and greater protectionism. This also could lead a loss of technical edge if America were unwilling to maintain a given level of R&D because of narrower international market and investment opportunities.

Despite compelling reasons for keeping governmental hands off international trade, there is a torrential flow of vital knowledge to an enemy sworn to destroy the system within which research, trade, and profits flourish. American technology has been used in at least 150 Soviet weapons systems. The USSR has some 20,000 people employed in acquiring, analyzing, and copying Western technology. Academic exchanges have been mostly one-way flows of American know-how to the Russians. The first Spatnik, for example, was designed primarily from information published in Western scientific journals.

Industrial espionage is serious. The stakes are inestimably high, and involve silicon chips, special alloys, robotics, and microelectronics. The pervasiveness of Soviet spying is shown by recent expulsions of Russian diplomats and journalists: four from Spain, three from the United States, three from Britain, and forty-seven from France in 1983. The French allege that during a single decade Soviet spies stole 30 percent of France's technical secrets. Of course it is not only Communists who steal secrets, as shown by recent United States indictments of several Japanese for industrial espionage.

A 1976 Department of Defense task force headed by Texas Instruments president J. Fred Bucy concluded there was inadequate control of design and manufacturing technology but excessive restriction of end product export. The task force recommended focusing on design and process details; keystone manufacturing; inspection and automatic test equipment; and products accompanied by sophisticated data

The Bucy Report recognized that no secret could be kept forever, but that the United States' lead time could be safeguarded by attention to active transfer mechanisms such as turnkey factories, licenses with extensive teaching effort, joint ventures, technical exchange agreements, and training programs. Obviously these far-reaching focal points touch upon everything from oil exploration to educating foreign nationals in American universities. A National Academy of Science report states that curtailing scientific exchanges would slow the innovation rate. Some price must be paid for national security, however, and the innovation rate in the USSR would be slowed even more.

Philosophically, if the West engages in R&D and the USSR copies it, the Soviets always will remain behind, although the learning curves will converge. As in the Aesopian example that someone who in each time period goes half way to a point will get even closer but never reach it, there always will be a gap between the inquisitive and acquisitive competitors in the technology race. Given the brute size of the Soviets' military establishment, their amoral decision processes, plus the higher cost of discovery than of replication, retarding the flow of know-how is imperative.

Implementation of the Bucy recommendations is worthwhile. It must be accompanied, however, by governmental authorities' recognition that once a decision is taken, all parties must be able to live with it. After-the-fact reversals, as in the cases of the Oshkosh Truck sale to Libya, the grain embargo, and the gas pipeline sanctions, are unfair, discriminatory, economically harmful, disruptive of the market system, and legally questionable.

Politics distort the market mechanism and rational planning is warped when nothing is secret and export licensing is an obstacle course of shifting priorities; however, barriers to planning and follow-through are not all bureaucratically engineered. Often enthusiasm for sales blinds businessmen to their products' strategic significance. Initial stages of prospective projects should involve severe preview and analysis. Legal counsel and economic simulators already scrutinize proposals, and the same rationale suggests a need for politico-technical preview.

Disorder in monitoring strategic trade, on the other hand, cries out for correction on the part of government. Exclusion of interested parties from the decision process would be unwise, but coordination is needed in the interest of full assessment. Corporate executives, schooled in the art of organization and management and able to tap technical expertise, should assist authorities in reviewing export licensing procedures.

Restructuring must include recognition that national security requires controls but that restrictions can only delay technology transfer and impose additional costs on its acquisition. Business-government collaboration is needed to establish rational cost-benefit analysis, more efficient paths to decisions to grant or withhold approval of transactions, and clearer policies for promoting exports without endangering the security of the private enterprise system, itself. ■

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IN APPRECIATION

The **Louisiana Business Review**, a quarterly publication of the Division of Research in the College of Business Administration at Louisiana State University, is dedicated to providing worthwhile and timely information on local, state and national economic developments of interest to members of the Louisiana business and government communities. This objective is being achieved by presenting high quality, readable articles written by knowledgeable representatives from business, government and academia. The Division would like to express its sincere appreciation to the following companies whose valuable contributions have made this publication possible.

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LOUISIANA BUSINESS REVIEW

Louisiana and Water

LETTER FROM THE EDITORIAL BOARD

The United States celebrated its 1876 Centennial by holding America's first world's fair. The Centennial Exposition, an enormous spectacle, was located on a 450-acre site at Philadelphia. Thirty-five nations sponsored exhibits at the fair, but America stole the show. It proudly demonstrated exhibits of such new American inventions as electric lamps, telephones, machine tools, assembly machines, steam hammers, steam-powered reapers and a vast array of other industrial and agricultural implements. More than a hundred restaurants fed the 10 million visitors from home and abroad.

World fairs no longer serve the same purpose as our country's first fair. The latter 19th century and first four decades of the 20th was a period when exciting and practical ideas relevant to the common man were the vogue in the newly industrialized United States, and the Fair was created as an end unto itself, its features serving a practical, educational, and recreational function. Modern North American Fairs, beginning with the Seattle World's Fair in 1962 and followed by New York (1964-65), Montreal (1967), San Antonio (1968), Spokane (1974), and Knoxville (1982), play a different role, relying more on spectacle and entertainment and less on exhibitions of technical achievements than did their predecessors. Sponsoring cities, while hoping they will attract enough revenue from visitors to cover expenses, have such long-range practical goals as renovation of depressed areas, stimulation of tourism, and opportunities to enhance their industrial bases through the media exposure to be gained from fairs.

Judged in terms of these modern criteria, the Louisiana Fair is a success. It is first and foremost a FUN fair. It has strolling musicians, acrobats, magicians, big name entertainment, stage shows, an outstanding aquatic show, audio/visual exhibits, technical innovations, and a host of other fascinating attractions. Its decor—including the mammoth mammary mermaids as well as the grinning alligators—is light and cheerful and reminiscent of a fair from the Victorian era. Louisiana has few good family attractions; for six months this year it has an excellent one.

Will the Louisiana's Fair be a success? The answer to this widely asked question depends upon what criteria are used in the evaluation. Despite a negative review by the *Wall Street Journal*, the overwhelming majority of fair visitors have indicated they were pleased by the Fair and that they had a good time. Hence, based on this significant criterion, the Louisiana Fair is a success.

The attention of the news media has been captured by the Fair's budgetary problems. The central question is: "will it be a financial success?" Once again, various criteria can be used to address this question. Utilizing a narrow view of estimating the total revenues to be obtained by the Louisiana World Exposition as opposed to the total costs incurred, it appears that the Fair will not be a financial success. Costs will probably exceed revenues, and the private financial backers of the Fair may lose their investments. The city of New Orleans and the state both stand to suffer direct financial losses, as well, should the Fair attendance fall too short of projections.

Unfortunately, the Louisiana Fair got squeezed between the problem-plagued 1982 Knoxville Fair and adverse media rumors that the Fair might be forced to close in mid-run. Knoxville spoiled a portion of the market for New Orleans by forcing itself in after the Louisiana event was scheduled. The adverse financial publicity had a drastic effect on the New Orleans Fair, resulting in a very large number of tour cancellations, as well as changes in individual travel plans.

Another major problem lay in the LWE's overly-optimistic marketing projection that 6. 5 million visitors would come from an area within 150 miles of New Orleans with only word-of-mouth advertising. It also appears that the major target area for the Fair's marketing campaign, was the major northern and far western United States cities, as well as the international markets.

A major portion of the Fair's advertising and promotion budget, therefore, apparently was wasted on a region of the country that possessed many disgruntled Knoxville visitors whose experiences were not likely to generate a stampede to another World's Fair in hot and humid New Orleans. Also, Fair planners placed their reliance on expectations of a large number of foreign visitors at a time when the Western World was undergoing a severe international economic recession, and the dollar had begun gaining strength against most other currencies. Finally, New Orleans does not have a reputation for being a center of family-oriented activities. The Smokey Mountains and the numerous family attractions within a two-hour drive from Knoxville may have been largely responsible for the great number of visitors the 1982 Fair received. All of which is to say that at the time of this writing, it appears LWE will not be successful in the short-term financial view.

On the other hand, if one utilizes a broad social benefit-cost analysis the Fair, apparently, will be a success. The total income and employment generated by the Fair throughout the state, the tax revenues obtained, the renovation of a rat-infested eyesore in New Orleans, the construction of a convention center, the repaving of streets and the value of an excellent recreational opportunity provided to Louisiana residents will result in total benefits exceeding total costs. Based on this criterion—which is the most appropriate measure of economic benefits and costs—it appears that the Fair will be a success.

(continued pg. 4)

SUMMER 1984

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The Editorial Board invites the submission of manuscripts to be considered for publication in this quarterly. Style sheets for manuscripts and manuscipt abstracts are available upon request. Comments and suggestions on any material appearing in the **LBR** are also welcome.

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COLLEGE HIGHLIGHTS

James Henry Appointed Dean

James B. Henry has been appointed Dean of the College of Business Administration. Dr. Henry comes from the University of South Carolina, where he was a professor of finance and accounting. He held several administrative posts at South Carolina and served as dean in the college of business at Kent State University. Dean Henry received his Ph.D. in accounting, finance, and economics from Syracuse University in 1970. He also holds a M.S. in accounting from Syracuse and an M.B.A. and a B.B.A. from Ohio University with majors in accounting, economics, and finance. He has been an officer in the National Association of Accountants for the past thirteen years and served as president of the Columbia chapter in 1976-77. He has published more than thirty articles in major journals of finance and accounting and participated in more than 140 executive development programs during the past ten years. A four-year Air Force veteran, Dean Henry is married to the former Elizabeth Brown of Columbia, South Carolina. The Henrys have two children; one in college and one in elementary school.

The Division of Research and Development introduced the *Louisiana Economic Trends (LET)* in June, a new publication intended to provide information to business, government, and other interested groups about economic and business trends occuring in the state and its parishes and metropolitan areas. The *LET* will be distributed primarily to the state's communications media for public dissemination. It will be published at irregular intervals to serve as a supplement to the Division's *Louisiana Economic Indicators* and the *Louisiana Business Review*.

Alvin C. Burns, professor of marketing, and **Daniel L. Sherrell**, assistant professor of marketing, were honored recently for presenting the best research paper at the 1984 Association for Business Simulation and Experiential Learning National Conference at Honolulu.

Courtland M. Chaney, instructor in management, will go to part-time status this fall in conjunction with his joining a group to form Human Resource Management Associates, Inc., of Baton Rouge to provide consulting services in the areas of personnel selection and development, organizational development, and management training.

Carol Dahl, associate professor of economics, presented a paper at the American Economic Association meeting in December with co-author **Roy Boyd**, University of Wisconsin at Milwaukee, entitled *"The Effect of the Yamal Soviet Gas Pipeline on European Energy Marluts."* She will present a paper on energy modeling in July at the International Forecasting Seminary at London.

Edmund R. Gray, chairman of the Department of Management; **Ben L. Kedia**, associate professor of management; and **D. E. Ezell**, professor at the University of Baltimore; co-authored a paper, *"Gerber Products Company A B,"* in the *Case Research Journal 1983*.

David B. Johnson, professor of economics and director of the Division of Research and Development, delivered a paper in July, *"An Economic Analysis of Blood Procurement Institutions,"* before the Third Annual International Conference on System Science in Health Care at Munich, Germany.

Stephen Looney, assistant professor of quantitative business analysis, was elected vice-president of the Louisiana Chapter of the American Statistical Association for 1984-85. He also was named representative for the Louisiana Chapter of the American Statistical Association Council of Chapters.

Ed Noell, graduate assistant in economics, was awarded the *Earhart Foundation Fellowship* for 1983-84.

G. Randolph Rice, associate professor of economics, has been elected president of *Omicron Delta Epsilon*, international economics honor society.

Bob Smith, professor of economics and coordinator of the LSU Program in Economics Education for elementary and secondary school teachers, is leaving the University in July to head a similar economics program at the University of Nevada-Las Vegas. Professor **Robert A. Flammang** will assume the position as director of the LSU program. Smith is retiring from LSU after twenty-two years of teaching.

Michael C. White, associate professor of management published several articles last spring, including *"Simulating the Intraorganizational Impact of Legislative Changes in the Mandatory Retirement Age, a Markovian Process Analysis,"* co-authors **Michael D. Crino**, assistant management professor, and **Terry L. Leap**, Clemson University; *International Journal of Management; "Environmental Turbulence: A Reappraisal of Emery and Trist,"* co-authors Crino and **Ben L. Kedia**, associate management professor, in *Administration and Society;* and *"Data on the Marlowe-Crowne and Edwards Social Desirability Scales,"* co-authors Crino, **Marita Svoboda** and **Stephen Rubenfeld**, both at the University of Minnesota at Duluth.

Mine Kuban Yucel, assistant professor of economics, was presented the *Gardner Award* for best dissertation in the humanities and social sciences at Rice University.

A team from the College of Business was pronounced winner of the Southeastern Intercollegiate MBA Tournament at a spring dinner at the University of Tennessee. The team consisted of **Mike Manuel, John Foster, Pat Silverman, Kimbelly Compher** and **Bill Morgan.** The tournament involved computer simulation games in which a series of business decisions were made weekly during a ten-week period.

Calls for Papers

The *American Business Review* of the University of New Haven was founded recently to serve as a forum of information for the business, academic, and governmental communities throughout the world. The *Review* welcomes both empirical and theoretical articles that can be applied or be pertinent to current business issues and practices. Manuscripts should be submitted to Editor Thomas Katsaros, University of New Haven, School of Business, 300 Orange Avenue, West Haven, CT:06516. Contributors' articles should be between twelve and eighteen double-spaced typewritten pages, and footnotes should appear on a separate page and follow a uniform style. The author should send two copies of his manuscript base, plus a short biography. Include also an abstract of not more than seventy-five words summarizing the paper.

The Cato Institute, a Washington-based public policy research organization, seeks papers in all aspects of public policy, particularly in such fields as property rights, private alternatives to government action, and deregulation. Publication formats include books, a journal, a monthly newsletter, and a series of reports. For further information contact David Boaz, Vice President, Cato Institute, 224 Second Street S.E., Washington, DC 20003.

Research Grants

Avijit Banerjee, assistant professor of quantitative business analysis, has received a $4,000 summer research grant from the LSU Research Council.

Vincent C. Brenner, accounting, has received support from the Ernst and Whinney Foundation for the project *"Faculty Summer Research Grant"*.

Michael M. Liffmann, Ports and Waterways Institute, has received support from Tangi-Transport, Inc., for the project *"Assessment of Opportunities to Develop Port Facilities at North Pass Manchac, Louisiana"*.

George R. Newkome, Center for Energy Studies, has received support from United Gas Pipeline Company for the project *"Energy Associates Program"*.

James A. Richardson, economics, has received support from private donors for the project *"Research, Training and Equipment"*

Roberta Scull, Center for Energy Studies, has received support from the State Department of Natural Resources for the project *"State of Louisiana: Energy Outlook"*.

Robert F. Smith, economics, has received support from the Louisiana Council on Economic Education for the project *"Director of Louisiana Council on Economic Education and Part-Time Assistant Professor"*.

Jerry Wallin, management, has received support from the Small Business Administration for the project "Small Business Institute Contract SBA". ■

LETTER *(continued)*

This issue's lead article, *The Louisiana World's Fair: Staying Alive*, by William T. Moody and Editor Joseph H. Wagner tracks the recent history of the Fair's financial woes and managerial reorganization, and then provides a discussion of its probable positive and negative economic impacts on Louisiana and city of New Orleans.

The theme of the Louisiana World's Fair—*The World of Rivers: Fresh Water as a Source of Life*—is an appropriate tribute to this most precious of natural resources, so much more important to life and the economy than other resources. Louisianians seldom give much thought to water until we get too much or too little of it. As the **LBR's** contribution to the theme of the Fair, David J. Molina's article, *Louisiana's Water Consumption* presents a brief summary of Louisiana's water use compared with neighboring states and the nation. In it he discusses various aspects of water supply and demand, including a comparison between Louisiana and its neighboring states, as well as the nation. Molina also considers several jurisdictional issues involving water use and points out differences between Louisiana law and those of its neighbors.

Michael M. Liffmann's article, *Port Development in Louisiana* discusses the vital contribution of waterborne commerce to the state's economy and describes its vast water transportation network of port commissions.

Finally, our Forum article is concerned with yet another water-related aspect: *The Exporting Trading Company Act of 1982*. Authors Timothy J. Watters and Hsin-Min Tong explore the background, provisions, criticisms, and expected benefits to be gained from this new federal law that relaxes some of the antitrust laws to enhance the position of American interests in foreign trade. ■

NATIONAL NEWS

Atlanta Fed Spotlights Growth

The Federal Reserve Bank of Atlanta's Research Department believes service industries, high technology, construction, defense, and exports are areas with appealing growth prospects over the next decade for the Southeast. Service industries, they predict, should enjoy the fastest growth of any industries nationwide through 1990. This area, fueled by the continued immigration of people with more money and greater aspirations, should gain the Southeast a disproportionately high share of that growth, with 75 percent of all new jobs being generated by service-producing industries.

Construction also seems to have an optimistic future in the Southeast, where the infrastructure will have to be enhanced to cope with a growing population. High technology is expected to increase its share of regional employment from 7 percent in 1981 to 9-10 percent in 1990 because of locational advantages. Much of the high-tech growth should stem from Defense Department spending on electronics, particularly in Florida. Louisiana and Mississippi shipbuilders should gain orders, along with munitions factories in Tennessee and maintenance shops in Alabama.

Exporting should prove a boon to the forest products and mining industries, as well as to farmers. Shipments from southeastern ports, which already already account for more than 25 percent of all U.S. waterborne exports, ought to increase with the economic revival of Europe, Canada, and Japan, the report states.

Do-It-Yourself Market Booms

American consumers spent more than ever before on home improvement products, as retail sales of lumber and building materials by hardware and supply dealers jumped 18 percent in 1983 to $52.8 billion, according to the *National Home Center News Annual Report on the Home Center Industry*.

The *Report* forecasts the home improvement market will continue to grow at better than 15 percent annually through next year, hitting $62 billion in 1984 and reaching $70 billion by 1985. Home center stores are also predicted to outpace the growth of the retail industry as a whole over the balance of the decade.

Move-ups Are Back

Move-up home buyers are coming back, says *Professional Builder* in an extensive report. The heart of the move-up market (35- to 44-year-olds) will be the fastest growing segment of the population for the balance of the '80s, it predicts. After 1985, another strong move-up group (45- to 54-year-olds) will become the second-fastest growing segment. The core move-up market of 35- to 54-year-olds will grow by 31.3 percent from 1985 to 1990, while the 25- to 34-year-olds will grow by only 4.1 percent. Some 55 million Americans will belong to the group between 35- and 54-years-of-age by 1985.

Mitigation Banking

A pilot program called *mitigation banking* on five thousand acres of Tenneco, Inc. Louisiana wetlands will earn the oil company environmental *credits* for building dams and an earthen levee to prevent flora and fauna destruction by saltwater intrusion. These credits in turn could be used to offset future *debits* that occur if dredging for an oil rig unavoidably caused environmental damage to wetlands. The $500,000 save-the-swamp effort could save the company millions of dollars by cutting through the red tape of future drilling projects in Louisiana marshes. Tenneco thinks the program should *bank* enough credits in the next twenty-five years for the company to dredge about one hundred canals.

The pilot program was worked out with state and federal authorities. Some environmentalists have been angered by the program, but others have given it grudging support. More than anything, though, the pilot program seems to be generating public relations mileage for Tenneco.

Trade Deficit Villain

Awesome trade deficits are predicted for America over the next three years by Data Resources, Inc. (DRI). Last year, exports of goods fell a record $60 billion short of imports. This was about a third as high as the federal budget shortfall of nearly $200 billion. Yet DRI believes the trade deficit will worsen, climbing to $84 billion this year, $103 billion in 1985, and $116 billion in 1986. There is plenty of cause to worry if this happens. DRI estimates that from the start of 1981 through the end of last year, the deteriorating trade balance cost the U.S. economy some two million export-related jobs. That added about two percentage points to the unemployment rate; however, foreign countries also spend their dollars in the U.S. market which offset, at least in part, this unemployment effect.

A major factor in the deepening trade gap is the stronger dollar. Analysts say the huge federal deficit pushes up interest rates, which makes the dollar climb on foreign-exchange markets. A strong dollar makes U.S. goods and services tougher for foreigners to buy, while making foreign goods and services cheaper for Americans.

Hispanic Market Is Growing

Most American retailers are beginning to recognize the burgeoning Hispanic market, which consists of more than 15 million citizens and estimates of an additional 8 million illegal immigrants.*Chain Store Age Executive* recently pointed out the Hispanic population is growing 6.5 times faster than the general population, and at the current growth rates, it will reach 40 million by 1990 to become the dominant United States minority. The report further estimates that the Hispanic people compose a potential consumer goods market of at least $50 billion annually.

Cloned Resumes Hurt Chances

Executive resumes are sounding increasingly alike as job candidates come to rely on the same books and experts for advice.*"All resumes seem to have similar formats, buzz-words and job descriptions. It's as though they're cloned from the same all-purpose resume,"* said William Halbrecht, president of Halbrecht Associates, a Stamford-based recruitment firm.

"Making sense of the more than two hundred resumes we receive each week is more difficult than in past years," observed Halbrecht. *"Lately, it seems as though every candidate for a management position—whatever his or her specialty area—has had a 'significant impact on profits' or is a 'take-charge' person. Cliches such as these make a resume meaningless and hurt an individual's prospects."*

He explained unsolicited resumes seldom figure in the assignments handled by his firm, but also noted that *"few search firms as a rule are going to ignore any information that comes their way."*

Halbrecht offered his suggestions for resumes and cover letters:

1. They should be viewed as marketing instruments, meant to catch the eye of the recruiter or potential employer;
2. Resumes should contain reasonably complete information, not merely tantalizing tidbits;
3. Stress should be placed on substance, figures, specific notable accomplishments, and concrete contributions;
4. Resumes and letters should reflect a business awareness in addition to technical or professional credentials;
5. State compensation and geographical preferences up front;
6. Stick to basics, and use clear language, and avoid window dressing such as printing resumes on fancy stationery; and,
7. If there appear to be too many jobs in a short period of time, be certain to address the fact explicitly in the cover letter. There is often a legitimate explanation.

Department Stores Gain Sales

Sales of department stores, which had given up ground to discount stores in the 1960s and 70s, showed a resurgence in sales last year. They outperformed discount stores in sales gains by three percentage points. These findings were revealed in a new *L-F Retail Sales Index* developed by Lebhar-Friedman, which reported comparison sales performance against a base year of 1980 showed that department stores scored 136.2 for fiscal 1983, against 132.2 for full-line discount stores. The composite group of all general merchandise stores measured by the Retail Sales Index rose to 131 for the year, which reflects a good year overall for general merchandise retailing. The three-year rise covering department, discount and catalog chain stores is ascribed to a pervasive trade up in the quality of goods in all segments of the general merchandise field.

Job Satisfaction Ranks High

Workaholics were greatly outnumbered by those working reasonable schedules in a survey of 1,300 executives conducted by the Dallas research firm of Ernst & Whinney. Two-thirds of those surveyed earned incomes greater than $50,000, yet only 13 percent reported working longer than fifty-nine hours per week. Job satisfaction also was high, with 93 percent reporting satisfaction with their jobs. The sample group was primarily composed of small business executives and pointed out improved sales and marketing as its greatest priority with more modern production facilities its least concern.

U.S. Business Asset

The Agency for International Development (AID) has developed a computerized data base to help link small and medium-sized U.S. firms to potential buyers in developing countries. American companies that ship U.S. goods to their foreign subsidiaries will find the AID's new *Automated Supplier System for Export Trade (ASSET)* useful, with its automated list of 33,000 U.S. companies that manufacture the products they need. To find out how to be listed in *ASSET*, or how to learn to find suppliers through the system, contact McManis Associates at 201 Sansome Street, San Francisco, CA 94104; or 1201 Connecticut Avenue NW, Washington DC , 20036.

GE Energy Reference Book

The *1984 U.S. Energy Data Book* is available to the public from the General Electric Company's Power Systems Sector. It is the sixth annual printing of the *Data Book*, designed as a ready reference to a broad spectrum of authoritative information on energy. The seventy-two-page, pocket-sized reference contains facts and statistics on a number of energy-related topics, including energy use, resources, economics, environment, electric systems, conversion, and new technologies. The book is produced as a public service by GE and is available at no charge. Copies may be obtained by calling (518)385-0959, or by writing U.S. Energy Data Book, General Electric Company, Attention Ms. Diane Vogel, 705 Corporations Park, Scotia, NY 12302. ■

LOUISIANA BULLETIN

Jax Brewery to Open

New Orleans' newly renovated Jackson Brewery riverfront marketplace will celebrate its grand opening September 22. The new attraction will reconnect the French Quarter and the Mississippi River. Visitors will be able to enjoy the river in a festive atmosphere at the brewery, where shopping and outdoor dining will take on a new level of excitement on its riverfront promenade.

The September opening marks completion of the first phase of a twenty-two-acre development being undertaken by The Jackson Brewery Development Corporation. Future phases include additional specialty retail, food and entertainment facilities, luxury condominiums, parking, and a festive park-like area along the river's shore.

Health Care Poll

Louisiana and Mississippi hospitals are being polled to seek consensus on changes in the U.S. health care system during the next decade. The study, *Health Care in the 1990s: Trends and Strategies*, is being conducted jointly by Arthur Andersen & Co. and the American College of Hospital Administrators (ACHA). It focuses on recent industry changes and their impacts on health care providers and consumers. Attitudes and perceptions of hospital executives, physicians, regulators, legislators, analysts, health care suppliers, health care insurers, and other health care industry executives will be assessed.

Areas of analysis range from economic and social issues and responsibilities to competition and technological applications.

Hospital communities of particular interest are New Orleans, Baton Rouge, Shreveport, Alexandria, and Monroe in Louisiana; and Jackson, Hattiesburg, and Biloxi/Gulfport in Mississippi. The results, to be released this summer, are expected to provide answers to the continuing national debate concerning the future of the nation's health care industry.

New Cajun Attraction

B. F. Trappey's Sons, the world-famous cannery of Louisiana condiments and foodstuffs, has opened an arts and crafts shop to accompany its popular pepper and pepper sauce plant tour as one of the favorite tourist stops in Acadiana. Trappey's has been a Cajun country canner and processor of yams, beans, pickled peppers, hot sauces, table sauces, and seasonings since 1898. It remains one of the country's largest family-owned processing companies. The Cajun Shop features only Cajun-related arts and crafts, and offers an outlet for area artists. The facility, located at 900 E. Main Street in New Iberia, also offers a lounge.

New Loading Record Is Set

The largest coal loading operation at a Gulf Coast port occurred early in March when the Norwegian collier *Tarcoola* departed Electro-Coal Transfer Company's Davant, Louisiana, terminal with 88,427 short tons of metallurgical coal destined for Sumimoto Metals in Japan. This load surpasses the previous high recorded last year by a Japanese vessel that loaded close to 81,000 short tons of coal at the docks of a Mobile, Alabama, terminal. The loading was completed in forty-six hours and forty-seven minutes from both ground storage and river barges.

IRS Automated Collections

The telephone contract phase of the IRS collection procedure has been changed. Calls to Louisiana residents who have not responded to Service Center notices regarding payment of delinquent tax accounts are being made through the Automated Collection System (ACS). This highly advanced data processing and telecommunications system serves the three districts of New Orleans, Houston, and Austin. The accounts of taxpayers who have not responded to normal Service Center notices are programmed into the ACS Data base.

The computer-driven system automatically prioritizes all accounts, and dials the taxpayer's known telephone number. When contact is made, a representative discusses the account with the taypayer and makes payment arrangements. This new system eliminates a great deal of the paperwork formerly associated with maintaining delinquent files. Those cases which cannot be resolved via ACS are transferred to IRS field collection personnel for necessary action.

Trade Mart Conferences

The International Trade Mart in New Orleans will co-sponsor three international business conferences in September and October for senior executives, exporters, importers, investors, bankers, lawyers, accountants, insurance brokers, maritime officials, and suppliers of other trade-related services. The conferences will examine key policy issues, trends, techniques, and views relative to international commerce.

International Letters of Credit will be the topic of the September 27-28 conference; followed by *Current and Developing Issues in International Taxation*, October 18-19; and *New Directions in International Trade*, October 25-26. Additional information on registration may be obtained from the International Trade Mart, 2900 ITM Building, 2 Canal Street, New Orleans, LA 70130; telephone (504) 529-1601.

International Business Center

U.S. and foreign businessmen visiting the World's Fair can get help at the International Business Center, Room 36, Great Hall. Representatives of the the U.S. Departments of Commerce and Agriculture, Customs Service, the Louisiana Department of Commerce and Industry, the International Trade Mart, the Port of New Orleans, the World Trade Club of Greater New Orleans, and the International Business Center Import Services, are on hand to assist businessmen in obtaining any information necessary for conducting manufacturing or foreign and domestic trade activities.

South Central States Attractive

The south central states of Texas, Louisiana, Oklahoma, and Arkansas continue to provide one of the best business climates for manufacturers, according to a study released by Alexander Grant & Company, a Chicago-based national accounting firm. These states, ranked out of forty-eight, were Texas, 6; Arkansas, 9; Louisiana, 16; and Oklahoma, 21. The region placed second nationwide, edged out narrowly by a cluster of nine states in the Southeast. Louisiana fell from twelfth in 1982, the report states, largely because of a decrease in state and local government fiscal policy and state-regulated employment cost factors. Florida repeated as the state with the best overall manufacturing climate among the forty-eight contiguous states. The other top ten states, in order, were North Dakota, South Dakota, Nebraska, Arizona, Texas, Mississippi, Utah, Arkansas, and North Carolina. Copies of the Grant study, 1983 General Manufacturing Business Climates Study, are available for $20 each from Alexander Grant & Co., 3900 Prudential Plaza, Chicago, IL 60601. ■

RESEARCH NOTES

The Economic Impact of a Regional Airport Upon the Local Area

by John E. Setnicky

This article reports on research sponsored jointly by the University of Southwestern Louisiana (USL) and the Louisiana Department of Transportation and Development (DODT) under State Project No. 780-28-03 during the period July 1981 through April 1982. This project is unique in Louisiana, according to David Blackshear of the DODT.

The purpose of the project was to measure and evaluate the economic impact of the Lafayette Regional Airport upon the city and parish of Lafayette by investigating the contributions made by general aviation transient passengers, the number of jobs directly and indirectly associated with aviation activities at the airport, the annual payrolls generated by private and public sector organizations operating at the airport, the taxes (state, parish, and city) paid by these organizations, and annual purchases of goods and services by them from other businesses in the city and parish.

There are, undoubtedly, many Lafayette Area people who, while aware of the existence of the Regional Airport, are unaware of the benefits accruing to them individually and collectively through its operation. The University of Southwestern Louisiana and the DOTD agreed an economic impact study on the facility would help the public to become more concious of the importance of regional airports.

The primary instrument for measurement and quantification used in this study was a proven formula developed by the Aircraft Owners and Pilots Association (AOPA). The total community dollar value was obtained by multiplying the total direct spending figure by the money multiplier factor of four (Chambers of Commerce estimate that each dollar spent directly turns over a minimum of four times in the local economy).

Relevant data on transient general aviation aircraft arriving at Lafayette Regional Airport were obtained from official FAA records. The Lafayette Parish Convention and Visitors Commission provided the figure of $67.21 per day per visitor, which was used in this study. The secondary instrument used in this study was a survey form with the following data items: total number of full-time employees, annual payroll, annual taxes (state, parish and city), and annual purchases of goods and services from other businesses in the Lafayette area.

Lafayette Regional Airport served as an aggregate employer of more than 1,255 people during 1980. That number of full-time employees is expected to increase to more than 1,388 during 1981, reflecting a growth in jobs of 10.6 percent. The annual payroll for the persons employed there during 1980 totaled more than $26,187,988. The total economic impact of that payroll on the local economy was estimated at $104,750,000. The total 1981 airport annual payroll was estimated at more than $28,781,745 with an associated total economic impact of $115,130,000.

Purchases of goods and services by Lafayette Regional Airport tenant organizations from other businesses in the Lafayette area totaled more than $16,444,262 during 1980. The dollar amount for purchases was estimated at more than $20,006,997 for 1981, an annual growth of 21.6 percent. When adjusted for inflation (1981 rate of 8.9 percent), real annual growth should be approximately

(continued pg. 16)

William T. Moody and Joseph H. Wagner

The World's Fair: Staying Alive

The Louisiana World's Fair has begun its 184-day run at New Orleans with rave reviews from its supporters, the general public, and even the doomsayers. Its theme, *The World of Rivers Fresh Water as a Source of Life*, is represented by a host of scientific and cultural exhibits (sponsored by foreign countries, the United States, and major corporations) amid an eighty-four-acre network of rushing streams, splashing fountains, cool lagoons, flowing acqueducts, and fanciful water sculptures. The $350-million exposition's daily features include Mardi Gras parades, fireworks, fine arts exhibits, live entertainment on twenty-two stages, and an eclectic and plentiful supply of ethnic eating establishments and shopping booths. Most visitors seem to perceive the extravaganza as being both entertaining and educational; however, government, business, and state taxpayers are somewhat pensive about the bottom line—will the Fair recover its costs?

Should the Louisiana World's Fair prove to be a financial failure, the big losers would include New Orleans, a consortium of banks, private investors, contractors, and the state of Louisiana. The New Orleans city government, for instance, already has decided how it plans to spend the $17.2 million in sales, amusement, and other taxes it expects to receive from fairgoers and tourists, but this figure is based on a 12-million attendance estimate. If attendance continues at its present rate, fewer than 8 million will pass through the gate by November 11, which will have a negative impact on city finances.

The city government estimates its fair-related spending at nearly $20 million. The main item was $15 million in repairs to streets around the site and in the French Quarter. Those repairs were financed by a state loan, which was to be repaid through a $1 surcharge on the Fair's admission price. New Orleans also planned to pay the debt service on the loan with a special one-cent tax that was levied on sales of tickets and merchandise at the Fair.

Very real fears exist that neither tax will bring in enough money, and that the city will have to make up the difference. If New Orleans is unable to pay back the loan by March 1985, the state will deduct the payments from the money the city receives through the state's revenue sharing program and tobacco tax revenues.

Altogether the Fair's debts were just over $98 million by mid-June, according to Martin Katz, vice president of the Louisiana World's Exposition, Incorporated (LWE). Several major components make up the debt load. Additional operating debts will become due in the weeks and months ahead. Some of the current debt, however, will be in the process of liquidation. Higher attendance is a must for the Fair to earn enough to begin paying its more current debts of about $31 million, Katz said.

LWE's financial problems unfolded throughout the spring. Its chronic underfunding forced the Fair into a defensive posture long before it opened. News of its financial problems first came to light January 24, when Fair President Petr Spurney announced it had used up most of its $55 million line of credit and was unable to borrow any more. Spurney said the negative cash flow crises had come three months later than expected.

Mayor Dutch Morial, in an effort to protect his city's interests, told LWE, February 6, that he wanted a status report on virtually every aspect from construction to finances. Negotiations between the city council and the Fair led to a release of $3 million by the city to complete on-site parking lots. The following day the New Orleans Dock Board refunded $7 million of the Fair's money it had held for a year as a guarantee that its wharf space, which is being used for several pavilions, would be returned in good condition. This supposedly meant LWE would be able to complete construction on time.

Further Evidence

Further evidence of the Fair's financial deterioration came at the end of March when LWE officials announced a sale of $6 million in discounted tickets to a department store to pay bills. They also said the Fair's coffers were again empty, and that they were trying to arrange similar sales with other outlets. Two weeks later, April 13, LWE asked Governor Edwin Edwards to help it survive until opening day.

Blame for the cash shortage was ascribed by LWE officials to slow ticket sales and delay of an agreement with a development corporation, the Rouse Corporation, that was supposed to produce $4 million. Spurney at that time raised the estimated minimum break-even attendance from 11 million to 12 million, or 65,000 visitors daily. Ticket sales had been off-schedule from the beginning. The Fair's one millionth visitor would not be registered until June 5, seven days and about 450 thousand tickets behind schedule.

The Legislature, in special session when the matter came up, approved a $10 million loan for the Fair on April 18. At the same time two New Orleans businessmen agreed to lend the Fair an additional $2 million. The $10 million was transferred to LWE April 31, and contractors were paid so that the event could open on time, May12.

Trouble at the Fair again became public May 18, when LWE records were released showing attendance running from 35 to 40 percent below

projection. The attendance shortfall was reflected immediately when the Fair failed to meet $14 million in construction bills due May 21. LWE officials responded four days later, May 25, by announcing price reductions in season passes and some ticket prices to boost lagging attendance.

The city, at the same time, initiated a demand for overdue sales taxes on the Fair. A city lien was placed against the Fair's eight bank accounts June 1. Three and one-half hours later the lien was partially lifted so that Fair employees could be paid. Ten percent of the Fair's cleanup crew was laid off June 1 because of the low attendance. The issue of back taxes was temporarily settled June 4 when LWE agreed to pay $1.5 million in city taxes.

Pressure began to intensify June 6 through 8 when meetings with contractors and the bank consortium resulted in an admission by LWE that it could pay neither group. The Fair at this point (June 11) again turned to Gov. Edwards for relief, who proposed a $15 million loan guarantee. The governor told LWE on the following day that it would have to reduce spending by an equal amount to get the credit, at the same time he announced his belief that businesses and individuals who originally guaranteed $40 million in Fair loans would probably lose it all.

Both houses of the Legislature, now in regular session, voted to allow Gov. Edwards to introduce a bill requesting the loan guarantee June 13. Some of its guarantors announced they would lend the Fair more money if asked to do so. On June 15 the governor instructed the New Orleans city government to take a more conciliatory attitude toward its financial troubles with the LWE, which had laid off 300 workers to comply with the governor's demand for a $15 million expense cut.

New Loan

The bail-out legislation was approved in the Louisiana Senate, June 18. The governor and Mayor Morial next announced a complicated agreement June 21 to keep the Fair running in return for surrender of its financial control to a seven-member committee named by the governor and the mayor. City, state, banks, and contractors, under the new terms, agreed not to take any action that would lead to the Fair's closing.

Governor Edwards, reassured Fair creditors would not close it down, agreed to push a now $17.5 million loan guarantee for the Fair through the Legislature. This loan guarantee, which is $2.5 million more than had been originally proposed, was intended to pay off part of the Fair's debts to banks and contractors. The extra $2.5 million was to be placed into a special emergency account. Banks actually would make the guaranteed loan, but the state has to cover payment if the Fair does not.

The city-state agreement specified how the Fair was to spend both the loan money and profits during the remaining period of its operation. The bank group received the first $5 million as payment on its $15 million loan, while the next $10 million was payed on the contractors' combined billings of $27 million. All state and city taxes are placed in a special escrow account.

The deal further stipulated that 37.5 percent of the money the Fair takes in after taxes is to be used to pay off the contractors. An equal amount was assigned to pay off the state-backed loan, and the remaining 25 percent was to be paid to the banks in the Hibernia group. The governor and the mayor each appointed two representatives on the seven-member finance committee, which approves all expenditures. They jointly named a member representing a major accounting firm. The banks and contractors named one member each.

The new state guaranteed loan reduced the Fair debt load to $17 million for contractors, $10 million owed to banks, and $4 million for trade debts. Trade debt (which fluctuates daily) was reported at $6 million June 18 by LWE President Petr Spurney. Some $2 million was to be paid afterward from operating revenues, Katz said June 21.

There is an additional $67.5 million of debts that do not threaten the Fair's existence. These include $10 million from the state's April loan (half due August 31 and half due September 30), and LWE's original $40 million bank loan (due June 30, 1985). The bank loan is backed for $35 million by private individuals and corporations, $2.5 million by the state, and $2.5 million by the City of New Orleans.

Gov. Edwards pointed out on national television that the Fair's financial problems stem from having a facility designed to handle twice as many people as are showing up. "*This Fair was designed and built to handle 75,000 people a day,*" he said, pointing out, "*Everything else relates to that magic number...The number of visitors is closer to 45,000 per day, and therefore the cash flow is not meeting expectations.*" He indicated Fair services would be trimmed down in proportion to the actual attendance level.

New Attendance Goal

A new 9.2 million attendance goal to meet the break-even level needed to keep it open under the reorganization was announced June 24 by LWE officials. They earlier estimated the Fair could break even financially with 12 million visitors. The lower number reflects the $15 million loan guaranteed by the state, and $15 million in cutbacks in the Fair's staffing, required as part of the state's bail-out plan for the event. Even if the Fair meets the new attendance goal (some 53,000 per day), it will still lose $47.1 million, according to current projections.

Supporters of the exposition still point with pride to the innovative financing developed for it. The Fair, they extoll, received most of its original funding in the form of guaranteed loans from investors, rather than by seeking state or federal underwriting. This system is under close observation by the planners of future Fairs and expositions, such as the 1985 Fair at Tsukuba, Japan, and the 1986 Fair at Vancouver, Canada. It is important to them to critique the New Orleans effort to pinpoint problem areas, particularly since it appears the Louisiana Exposition's backers have only a small chance of recouping on their investments.

So what went wrong at New Orleans? Perhaps nothing. World's Fairs historically are not big money makers. They were introduced to America in the last half of the nineteenth century as salutes to our technical progress. The Philadelphia Centennial Exposition of 1876 featured new technology, as did the 1893 Chicago Columbian Exposition.

Fairs continued to extoll the American spirit of progress and optimism until World War I and the Great Depression dampened the nation's self-confidence. A new attitude was evident in the 1933 Chicago World's Fair theme of *Science Finds, Industry Applies, Man Conforms*, an apparent suggestion that Man was losing control of his technology. Still fairs of the thirties helped provide escape from the reality of a world rapidly heading toward conflagration. People flocked to the 1939 New York Fair's General Motors Futurama exhibit of 1960 America, while the war in Europe was banned from newscasts at the fairgrounds.

Host cities began to concentrate on the immediate benefits of tourism and investment after World War II. The 1962 Seattle Century 21 Exposition aimed at stimulating economic growth and contributed to the development of a thriving metropolitan area. New York's 1964 fair was a study in urban renewal, attempting to transform a giant trash dump on Long Island into an extravagant permanent tourist attraction. The effort failed and New York lost $21 million, but the pattern was established. Planners for the 1982 Knoxville Fair were more cautious than those of New York, but they had the same goal of renovating a deteriorated section of the city.

Seattle in 1962 (attendance 9.6 million) was the only one of six world's Fairs held on the North American continent since 1939 to earn a profit. Spokane in 1974 (5.7 million visitors) came close to breaking even, losing a mere $600,000. The remaining four, Montreal in 1967 (50.3 million), New York in 1964-65 (27.1 million), San Antonio in 1968 (6.3 million), and Knoxville in 1982 (11 million), counted their losses in the millions.

Given that world's fairs tend to lose money, what can be done to minimize losses? Past experience indicates construction costs must be kept near projected levels, and Fair attendance projections must be met. Problems in these two critical areas show up in the profit and loss statement.

Construction Costs

Excessive construction costs, including such factors as change orders, completion delays, and inadequate design, can be major determinants in whether or not a fair will be a financial success. Significant cost overruns in construction for the Montreal and San Antonio fairs contributed heavily to their large losses. Reportedly the New Orleans Fair's construction costs should come in close to its $94 million budget.

LWE was responsible for the construction of the New Orleans exhibit buildings, except for the $95 million Louisiana Exhibition Center financed through separate federal and state funding. The exhibitors—foreign, corporate, and state—were in turn responsible for installing their displays within the LWE-provided buildings at their own expense.

Construction funding was tight from the onset. Initial funding for LWE construction was based on a $55 million loan from a consortium of Louisiana banks backed by a group of 138 of Louisiana's largest corporations and a few private individuals. The balance of LWE's construction funding was to be gleaned from advanced ticket sales and concession payments and fees.

The January admission of a negative cash flow in itself was not an indication that Fair construction was out of budget, but that, perhaps, something was wrong with the anticipated level of LWE funding from advanced ticket sales and concession payments. Concession stands on the Fair grounds were at maximum occupancy, according to LWE officials, so that left only advance ticket sales as the culprit in the shortfall. Actual figures from the LWE are unavailable at this point to determine the severity of the advance ticket sales problem.

Attendance

LWE officials helped their attendance situation considerably with a Memorial Day weekend ticket price reduction from the original $15 dollars to a $9.95 amount. Attendance that Saturday (May 26) was 61,200, the largest crowd since the Fair's opening crowd of 83,111, and the Fourth of July crowd went past 90,000. Still, in early-July the Fair crowds remained disappointingly below the 55,000 average daily attendance needed to meet the 9.2 million break-even figure.

Attaining projected attendance levels is critical to the Fair's success. The Fair facilities were based on an original projected total attendance of some 11 million. All revenue estimates (tickets, merchandise, and concession sales) and most indirect economic impacts (visitor spending in the economy) were calculated on this basis.

The Harrison and Price Company, a San Francisco economics consulting firm, made the economic estimates for the LWE. Its attendance

projection of 11 million visitors was based on models of attendance patterns from five previous Fairs (New York, Montreal, Seattle, Spokane, and San Antonio).

Sixty percent of the 11 million, or 6.8 million, was expected from the *resident market*, the area within a 150-mile radius of the Fair site. Louisiana's resident market contains approximately 5 million people, so the 6.8 million figure included repeat visitation. The remaining forty percent was to come from tourist visitation from beyond the resident market area.

The New Orleans projections were based on the model of the successful Seattle Fair, which was analogous to Louisiana's situation in several respects. The resident market is of comparable size—5.9 million people for Seattle verses 5 million for New Orleans. The two cities are similarly located geographically (both are coastal cities), and the two Fair sites are comparably sized—72 acres for Seattle verses 82 acres for New Orleans. The Crescent City also was believed to have a stronger non-resident attendance than Seattle because of its long-established reputation for world-class tourism.

Some of the potential attendance pitfalls become evident when compared with the experiences of past Fairs. San Antonio, New York, and Montreal were well short of their projected attendance figures. The more successful Fairs of Seattle, Spokane, and Knoxville were very close to or somewhat above projected figures. San Antonio's attendance shortfall was due primarily to a lack of promotion. National advertising of the Fair didn't begin until a month after its opening. New Orleans seems to be suffering from a similar situation.

LWE reportedly put its approximately $5 million advertising budget into a national promotional campaign, primarily aimed at large northern and western markets. The advertising effort was initiated in late January and made extensive use of television, magazines, and newspapers. The campaign, like the Fair itself, was not sufficiently funded to carry out its mission.

Louisiana's Tourist Development Commission used its $500,000 advertising budget in supplementing the LWE advertising effort with newspaper, magazine, and radio ads generally aimed at the 150-mile contiguous area from which the Fair expected to gain most of its visitors. The LWE ruefully has been forced to follow the Commission's lead.

George Williams, recently-appointed Fair vice president of marketing, explained: "*I think we started the marketing of this Fair with an international and national event in mind, going to the heavy population centers that contributed so heavily to Knoxville's attendance (11 million in 1982) with too small a (marketing) budget.*

"*We just simply did not have enough (money) to adequately penetrate the market that we were trying to reach to make this truly an international and national event. And in the process of that, we ran out of steam before we were able to get back into our primary (regional) market and do the selling there. We made a lot of assumptions, and we were wrong,*" Williams said.

New York's attendance problems can be attributed to a number of factors. This Fair was planned on a very large scale (646 acres) and was to run for a two-year period to ensure a profit. New York's decision to operate its Fair for two years precluded its sanction by the Bureau of International Expositions in Paris—the official World's Fair authorizing agency. The Bureau, representing thirty-five member nations that support and participate in world's fairs, allows only a six-month run. As a result, New York failed to gain adequate foreign interest and participation, leaving a large amount of vacant space on the Fairgrounds.

Louisiana's moderately-sized Fair (actually an exposition rather than the larger Fair) is officially sanctioned by the Bureau, and the majority of the Fair grounds is being well utilized. Participants include twenty-three foreign exhibitors, ten states, and fifteen major corporate exhibits. Special attractions include a host of internationally famous entertainers, the space shuttle Enterprise, and works of art from the Vatican.

New York and San Antonio suffered from management problems that generated bad publicity and detracted from the smooth operation of their Fairs. San Antonio's executive director quit halfway through the Fair's run. New York and San Antonio were also subject to unfortunate natural disasters quite beyond anyone's control. New York had to contend with riots in Harlem during 1964, and it rained the first two weeks of San Antonio's Fair.

Attendance, however, is not always the answer to all Fair problems. Montreal, a huge Fair of one thousand acres, paradoxically had problems stemming from too much attendance. Their attendance level was 20 million over predictions, and this resulted in severe congestion on the fair site. This was by no means the primary reason for Montreal's huge losses, but the additional personnel required to handle the large crowds contributed significantly to costs.

Louisiana's site was built to handle more than 11 million visitors, although this seems unlikely. Spokane had a surge of attendance half-way through its fair's run because of the positive publicity it generated. Knoxville experienced the same phenomenon in the opposite direction due to adverse publicity about high hotel rates, long lines, crowding, and poor exhibit quality. New Orleans is experienced in handling large tourist crowds gracefully, while having adequate hotel and transportation facilities available, and therefore it seems likely that the Fair can maintain its good press. Furthermore, as Governor Edwards has pointed out, the reduced crowds allow the visitor a much better buy for his money because he can see the Fair without waiting in long lines.

TABLE 1

ECONOMIC IMPACT OF THE WORLD'S FAIR*

Estimate of the Expenditures for Staging the Fair and Fair-Induced Expenditures by Visitors

	Thousands of 1984 Dollars
1. Total Capital Expenditures (by Expo Corporation, Exhibitors and Concessionaires)	$160,000
2. Total Operating Expenditures (by Expo Corporations, Exhibitors and Concessionaires)	$180,900
3. Total Expenditures by Visitors at the Fair (9.2 million visitors each spending $25)	$230,000
4. Total Off-Site Visitor Expenditures, in addition to usual tourist expenditures	$189,612
TOTAL New Outlay Impacting the Economy (1 + 2 + 4)	$530,512
TOTAL Capital and General Operating Expenditures (1 + part of 2)	$218,150

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*The estimates are based on the data provided by the Louisiana World Expo, Inc.; estimates by the Harrison Price Company; and the Division of Research.

TABLE 2

New Earnings (Proprietors and Wages/Salary) and Employment Created by $529,700,000 of Outlays (in 1984 dollars)

Sector	Total Earnings	Man-Years of Employment
Agriculture, Forestry and Fisheries	$ 4,000,000	220
Mining	1,384,000	37
Construction	70,564,000	2,600
Non-durable Goods Manufacturing	12,378,000	464
Durable Goods Manufacturing	10,722,000	338
Transportation, Communication, Public Utilities	24,490,000	1,000
Wholesale Trade	17,564,000	700
Retail Trade	98,240,000	8,000
Finance, Insurance, Real Estate	12,432,000	600
Services	92,320,000	4,000
TOTALS	$344,094,000	17,959

Economic Impacts

Even though world's fairs seldom make money, a fair can generate indirect profits. It can function as an economic *pump primer*, or a catalyst for long-awaited improvements and additions to a city's physical facilities. Fairs also can help develop a state's tourism industry. There are both direct and indirect economic impacts made by fairs. Direct economic impacts arise from two main sources: the development and operation of the fair and visitor expenditures. These expenditures could total more than $530 million in New Orleans, and the economic activity generated will provide further economic value (through a multiplier effect) by turning over two or three times.

The Fair's projected total economic impact on the New Orleans economy (based on a 9.2 million attendance) is estimated by A.M.M. Jamal of the LSU Division of Research and Development at $530.5 million (Table 1). This figure includes estimates of $160 million in total capital expenditures by LWE, exhibitors, and concessionaires; $180.9 million for total operating expenditures by the three groups; and a total off-site visitor expenditures of $189.6million.

According to the economist's calculations, the following sectors of the economy will reap the greatest economic benefits in terms of worker earnings and employment. The construction industry has benefited by building $122 million worth of fair-related facilities. Jamal's study shows a construction industry impact of $70.56 million in total earnings and an additional 2,600 man-years of employment (Table 2). His figures do not include the $95 million convention center and eleven new hotels built because of the Fair.

Table 3

Tax Revenue Generated*
(thousands of 1984 dollars)

Source of Revenue	**Amount**
Sales Tax from On-Site* Visitor Spending	$17,893
Off-Site Visitor Spending*	6,785
Hotel Tax*	4,266
Amusement Tax*	4,684
State Income Tax	6,881
All Other Direct and Indirect Sales Tax	56,334
TOTALS	$96,843

*The data is based on estimates by Harrison Price Company and the Division of Research.

Visitor spending will stimulate the retail trade industry in the New Orleans area to the tune of an estimated $98 million in earnings and employment of 8,000 man-years. The hospitality and services industry is the next-largest gainer, with $92 million in total earnings and 4,000 in additional man-years of employment.

Other sectors will be affected, but to a lesser extent. These are, in order of magnitude, transportation, communication, and public utilities; manufacturing; wholesale trade; finance, insurance, and real estate; agriculture, forestry, and fisheries; and mining. Total impacts for all sectors will be $344 million in new earnings and some 18,000 man-years of employment. Both the development and operation of the Fair and visitor expenditures will have a significant influence on the state and local tax bases. A total of $96,843 million in additional state revenues will be generated (*Table 3*).

Residual Impacts

The residual impacts of the Fair are those that will have a long term impacton the city and the state; the most obvious being the physical structures that will remain after it closes. Some examples from previous fairs are Seattle's Space Needle and Pacific Science Center, and Spokane's Riverfront Park and opera house convention center.

Louisiana has its own list of residuals. The Fair has been a catalyst in upgrading New Orleans facilities. A special tax on admission tickets will help pay for $30 million in capital improvements such as the repairing of streets, new sidewalks, and development of urban malls (Fulton Street Mall) adjacent to the Fair site. Another $40 million will be spent upgrading the Greater New Orleans International Airport.

The huge building (350,000 square feet) that houses Louisiana's exhibit is a first-class structure intended for use as a convention center after the Fair. This addition to city facilities will enable it to attract exhibits and conventions presently unmanageable, under existing resources.

A certain amount of urban renewal also has resulted from the Fair. A blighted warehouse area that borders the Fair site has been renovated. Twenty-seven historic warehouses have been improved, and those that could not be salvaged were torn down and new facilities built. A dilapidated railroad yard has been turned into the primary Fair parking lot.

Other permanent structures left after the Fair will include a gondola system crossing high above the Mississippi River that will become a part of the transportation network of the city. The two-story international pavilion will be converted to office space on one floor, and the second floor will be turned over to the Rouse Corporation for the development of a $25 million merchandise and food market similar to Faneuil Hall in Boston and Harbor Place in Baltimore.

Then there is the long-range aspect of using the Fair to promote the state's business opportunities and resources across the nation. This is the function of the Business Briefing Center in the Louisiana Pavilion. *"The World's Fair has offered us an excellent opportunity promote business investment in our state by inviting key corporate executives to the Fair and to our Briefing Center,"* says Secretary of Commerce Ron Faucheux. The Center houses a combined data processing and video presentation tool which assists select corporate executives in making business location decisions.

The visiting executive is invited to view a short film about the state, which provides him with a list of criteria relevant to making business location decisions. The executive makes up his list of criteria for the computer, which then does a file search and compiles a list of up to fifteen sites matching the stated criteria. Five of the listed sites then can be selected for detailed comparison according to priority criteria.

The computer data files include detailed summaries on manufacturing and large commercial and office buildings for sale or lease, industrial and commercial acreage, commercial office and industrial parks, local communities and their resources, statistics and demographics on each of the state's sixty-four parishes, summaries on labor forces and wages, airport facilities, economic development contact persons in each parish, and site and facility photographs. The data file can be updated at any time. After the Fair, the system will be transferred to the Department's Baton Rouge office, where it will continue to assist in the state's economic development efforts.

Some six hundred guests visited the Center during the Fair's first ninety days, of which nearly two hundred made inquiries from the computer. Faucheux's department already has received several strong indications of interest in locating in Louisiana from businessmen visiting the Center.

Negative Impacts

There are also some negative Fair impacts to consider. Any Fair losses must be paid, and New Orleans seems destined to have a financial deficit. Hotel and restaurant prices are higher. Furthermore, a certain number of jobs were displaced when the Fair site was originally cleared; however, the majority of those should be reestablished upon completion of the Fair.

Despite the negative aspects and uncertainties of hosting an event as ambitious as a Fair, host cities in the past have generally viewed the experience as a good one. The national and international images of the state and host city are usually upgraded as a result of staging an event of the magnitude of a world's Fair. Louisiana, then, can expect to be well recompensed for any cash losses it suffers as a result of the Fair in the form of future business and trade. The final analysis is that the Louisiana World's Fair is a fact—let's enjoy it.

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RESEARCH NOTES

ECONOMIC IMPACT OF LAFAYETTE AIRPORT

1980

General Aviation	$ 69,200,000
Payroll	104,750,000
Purchases	65,770,000
Taxes	1,220,000
Total Impact	$240,000,000

1981

General Aviation	$ 76,900,000
Payroll	115,130,000
Purchases	80,000,000
Taxes	1,980,000
Total Impact	$274,000,000

(continued)

12.7 percent. Total economic impact of purchases of goods and services was estimated at approximately $65,770,000 in 1980 and $80,000,000 for 1981.

General Aviation transient aircraft arrival flights at Lafayette Regional Airport were recorded at 134,062 flights during 1980. The associated total economic impact upon the local economy by general aviation visitors was estimated at approximately $69,200,000. For 1981, general aviation transient activity was recorded at 149,135 arrival flights with an associated total economic impact of approximately $76,900,000.

Taxes (state, parish and city) collected from Lafayette Regional Airport tenant organizations was more than 1,220,000 for 1980. These taxes for 1981 were estimated at more than $1,980,000.

The Lafayette Regional Airport's total economic impact upon the city of Lafayette and Lafayette Parish was estimated at approximately $240,000,000 during 1980. Total economic impact for 1981 was estimated at some $274 million.

The findings of this study established the significant economic impact and importance of the Lafayette Regional Airport to the city of Lafayette and Lafayette Parish.

JOHN E. SETNICKY is an assistant professor in the Department of Management and Adminsistrative Studies at the University of Southwestern Louisiana.

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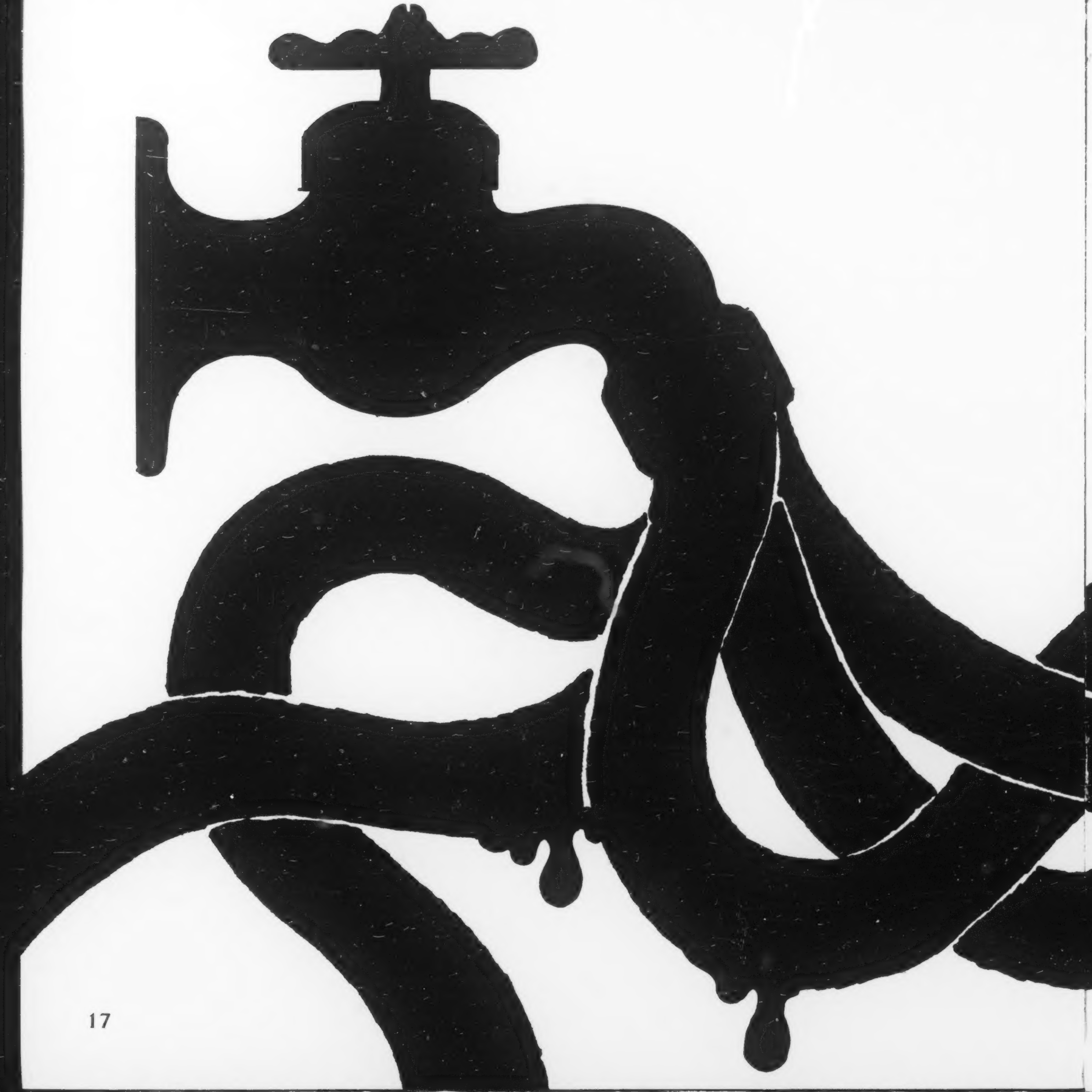
David J. Molina

Conspicuous Consumption:

Water in Louisiana

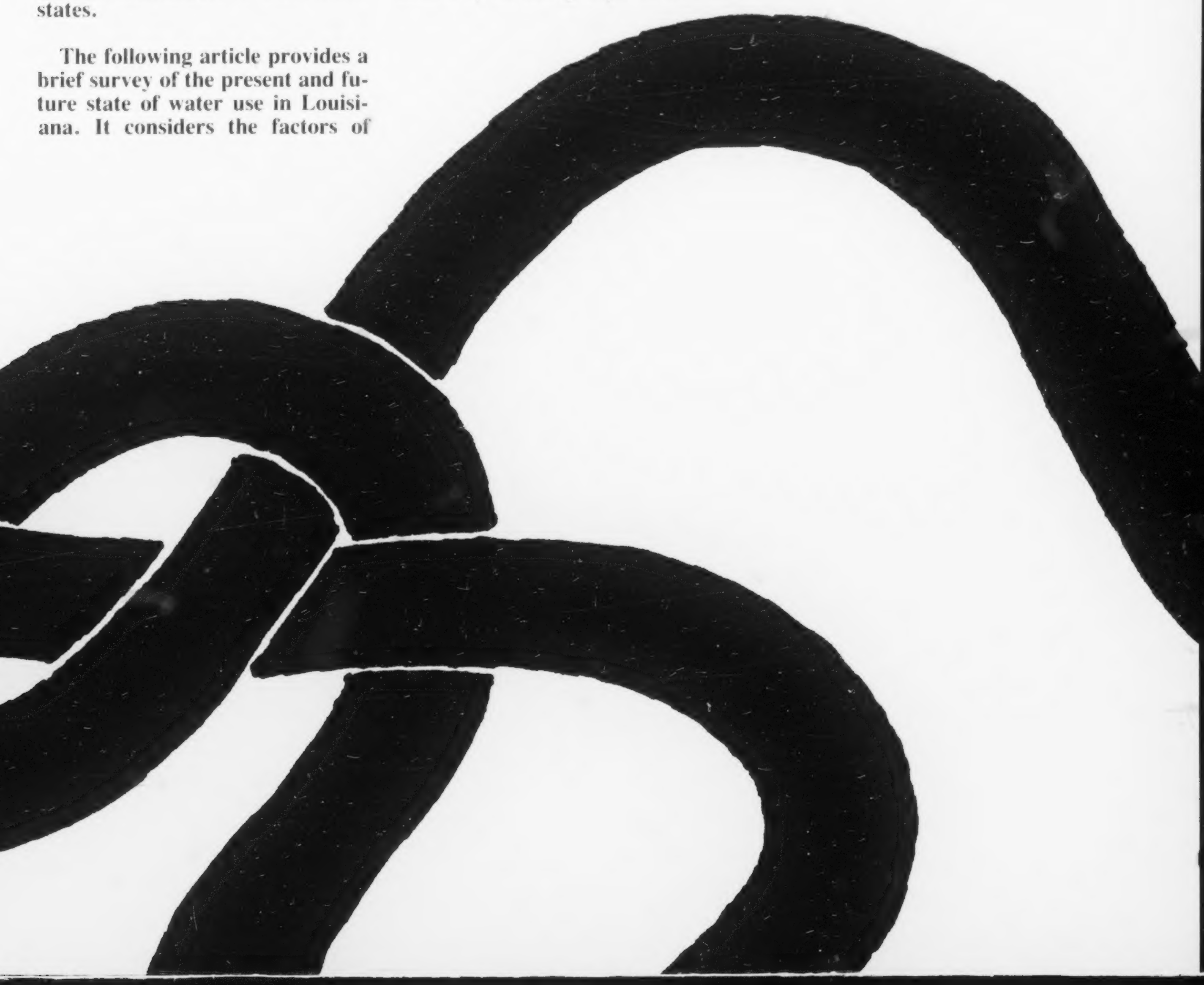


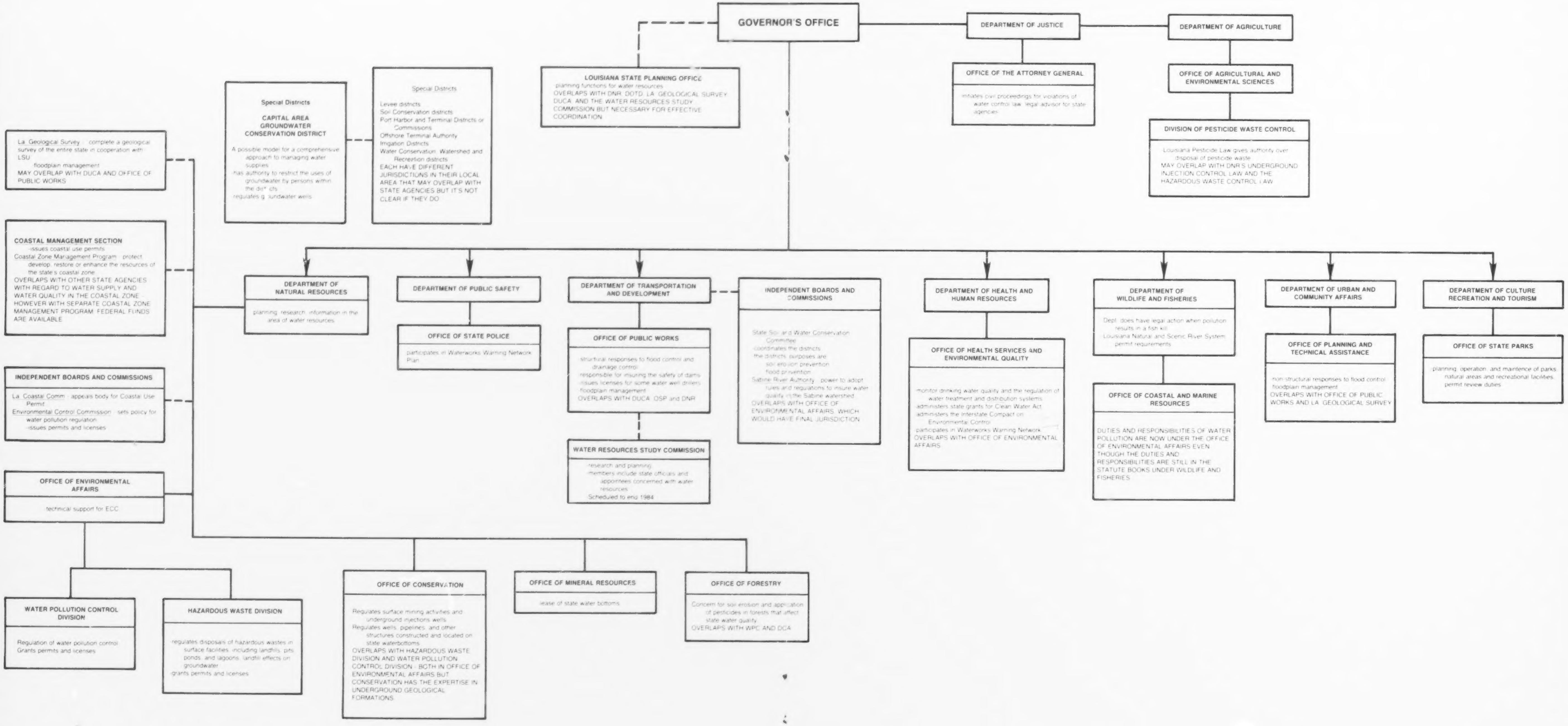
Louisiana, located in the *water-rich* eastern half of the United States, traditionally has exercised considerable flexibility in the management of its abundance of fresh water. This vital natural resource, in the form of surface water alone, accounts for more than 5 percent of the state's total territory. Water in Louisiana, however, is not unlimited. Improper use of it could not only hinder present economic development but also could accelerate the deterioration of both the quality and quantity of the state's future water supply. Louisiana's bountiful fresh water resources, on the other hand, have provided it with economic activities and growth unavailable to most other states.

The following article provides a brief survey of the present and future state of water use in Louisiana. It considers the factors of water-use demand, supply, jurisdiction, and price in hope of providing an insight into a topic on which policymakers, special interest groups, and Louisianians in all walks of life are increasingly focusing their attention.

Water users are often classified into four groupings that reflect their levels of demand. These include public-supply users, self-supply industrial users, rural users, and irrigation users. The quantity used by each group in Louisiana, its neighboring states, and the nation are discussed in *Table 1*, in which the offstream use (total water withdrawal by all four groups) in million gallons per day (*mgd*), the state per capita offstream use, and the proportional 1980 use by each group is presented.

The total figures, although perhaps misleading, show Texas to be the largest user, followed in descending order by Arkansas, Louisiana, and Mississippi. Those figures may not represent an accurate comparison across states of the relative importance of any one water use since each group requires a different yardstick. Nonetheless, these figures suggest water use in Louisiana is distributed more as it is in Mississippi than in the other two states or the nation. Both states have a greater portion of





GOVERNOR'S OFFICE

LOUISIANA STATE PLANNING OFFICE
-planning functions for water resources
OVERLAPS WITH DNR, DOTD, LA. GEOLOGICAL SURVEY, DUCA, AND THE WATER RESOURCES STUDY COMMISSION BUT NECESSARY FOR EFFECTIVE COORDINATION

DEPARTMENT OF JUSTICE

OFFICE OF THE ATTORNEY GENERAL
initiates civil proceedings for violations of water control law, legal advisor for state agencies

DEPARTMENT OF AGRICULTURE

OFFICE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

DIVISION OF PESTICIDE WASTE CONTROL
Louisiana Pesticide Law gives authority over disposal of pesticide waste
MAY OVERLAP WITH DNR'S UNDERGROUND INJECTION CONTROL LAW AND THE HAZARDOUS WASTE CONTROL LAW

Special Districts

CAPITAL AREA GROUNDWATER CONSERVATION DISTRICT
A possible model for a comprehensive approach to managing water supplies
-has authority to restrict the uses of groundwater by persons within the districts
-regulates groundwater wells

Special Districts
Levee districts
Soil Conservation districts
Port Harbor and Terminal Districts or Commissions
Offshore Terminal Authority
Irrigation Districts
Water Conservation, Watershed and Recreation districts
EACH HAVE DIFFERENT JURISDICTIONS IN THEIR LOCAL AREA THAT MAY OVERLAP WITH STATE AGENCIES BUT IT'S NOT CLEAR IF THEY DO

La. Geological Survey - complete a geological survey of the entire state in cooperation with LSU
-floodplain management
MAY OVERLAP WITH DUCA AND OFFICE OF PUBLIC WORKS

COASTAL MANAGEMENT SECTION
-issues coastal use permits
Coastal Zone Management Program - protect, develop, restore or enhance the resources of the state's coastal zone
OVERLAPS WITH OTHER STATE AGENCIES WITH REGARD TO WATER SUPPLY AND WATER QUALITY IN THE COASTAL ZONE - HOWEVER WITH SEPARATE COASTAL ZONE MANAGEMENT PROGRAM, FEDERAL FUNDS ARE AVAILABLE

INDEPENDENT BOARDS AND COMMISSIONS
La. Coastal Comm. - appeals body for Coastal Use Permit
Environmental Control Commission - sets policy for water pollution regulation
-issues permits and licenses

OFFICE OF ENVIRONMENTAL AFFAIRS
technical support for ECC

WATER POLLUTION CONTROL DIVISION
Regulation of water pollution control
Grants permits and licenses

HAZARDOUS WASTE DIVISION
-regulates disposals of hazardous wastes in surface facilities, including landfills, pits, ponds, and lagoons, landfill effects on groundwater
-grants permits and licenses

DEPARTMENT OF NATURAL RESOURCES
planning, research, information in the area of water resources

OFFICE OF CONSERVATION
Regulates surface mining activities and underground injections wells
Regulates wells, pipelines, and other structures constructed and located on state waterbottoms
OVERLAPS WITH HAZARDOUS WASTE DIVISION AND WATER POLLUTION CONTROL DIVISION - BOTH IN OFFICE OF ENVIRONMENTAL AFFAIRS BUT CONSERVATION HAS THE EXPERTISE IN UNDERGROUND GEOLOGICAL FORMATIONS

OFFICE OF MINERAL RESOURCES
lease of state water bottoms

OFFICE OF FORESTRY
Concern for soil erosion and application of pesticides in forests that affect state water quality
OVERLAPS WITH WPC AND DCA

DEPARTMENT OF PUBLIC SAFETY

OFFICE OF STATE POLICE
participates in Waterworks Warning Network Plan

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

OFFICE OF PUBLIC WORKS
-structural responses to flood control and drainage control
-responsible for insuring the safety of dams
-issues licenses for some water well drillers
-floodplain management
OVERLAPS WITH DUCA, OSP and DNR

WATER RESOURCES STUDY COMMISSION
-research and planning
-members include state officials and appointees concerned with water resources
Scheduled to end 1984

INDEPENDENT BOARDS AND COMMISSIONS
State Soil and Water Conservation Committee
-coordinates the districts
-the districts' purposes are
soil erosion prevention
flood prevention
Sabine River Authority - power to adopt rules and regulations to insure water quality in the Sabine watershed
OVERLAPS WITH OFFICE OF ENVIRONMENTAL AFFAIRS, WHICH WOULD HAVE FINAL JURISDICTION

DEPARTMENT OF HEALTH AND HUMAN RESOURCES

OFFICE OF HEALTH SERVICES AND ENVIRONMENTAL QUALITY
-monitor drinking water quality and the regulation of water treatment and distribution systems
-administers state grants for Clean Water Act
-administers the Interstate Compact on Environmental Control
-participates in Waterworks Warning Network
OVERLAPS WITH OFFICE OF ENVIRONMENTAL AFFAIRS

DEPARTMENT OF WILDLIFE AND FISHERIES
Dept. does have legal action when pollution results in a fish kill
Louisiana Natural and Scenic River System permit requirements

OFFICE OF COASTAL AND MARINE RESOURCES
DUTIES AND RESPONSIBILITIES OF WATER POLLUTION ARE NOW UNDER THE OFFICE OF ENVIRONMENTAL AFFAIRS EVEN THOUGH THE DUTIES AND RESPONSIBILITIES ARE STILL IN THE STATUTE BOOKS UNDER WILDLIFE AND FISHERIES

DEPARTMENT OF URBAN AND COMMUNITY AFFAIRS

OFFICE OF PLANNING AND TECHNICAL ASSISTANCE
-non-structural responses to flood control
-floodplain management
OVERLAPS WITH OFFICE OF PUBLIC WORKS AND LA. GEOLOGICAL SURVEY

DEPARTMENT OF CULTURE RECREATION AND TOURISM

OFFICE OF STATE PARKS
-planning, operation, and maintence of parks, natural areas and recreational facilities
-permit review duties

Louisiana's Complex Bureaucratic Water Resource Organization*

*Produced by Public Affairs Research Council public-use water and self-supplied industrial water use than do Texas, Arkansas, or the nation. The two states also have proportions of water use for irrigational needs below the national average. Let us now compare each group according to its own meaningful measurement.

Public-Supply

Public-supply use is water withdrawn for all uses by public water suppliers, such as municipalities, who then deliver it to users. In comparing public-supply across states, a per capita water use figure (*Table 2*) provides a meaningful reference point. Texas and, to a lesser extent, Louisiana have per capita public-supply water uses greater than the national average. Consequently, under a fixed number of suppliers, the average private or public water supplier in these two states might achieve economies of scale. This is because public-supply water is a high fixed-cost industry, and so the cost of additional gallons of water supplied will usually decrease the average cost.

Self-Supplied Industrial

Self-supplied industrial water use is that water directly withdrawn by a firm. Self-supplied industrial water consumers are generally subdivided into thermoelectric power (electric utility) and other users. The total water use by self-supplied industrial users, the thermoelectric and the per capita use, and the other self-supplied industrial use and the per capita use in each state and the nation is presented in (*Table 2*).

Louisiana's use of self-supplied industrial water for thermoelectric power is lower than the national average, yet it experiences a larger than average per capita water use by the thermoelectric power industry. This, as we will see later, may be due in part to the state's jurisdictional laws.

TABLE 1

TOTAL WATER USE AND THE DISTRIBUTION AMONG THE MAJOR CATEGORIES IN LOUISIANA, NEIGHBORING STATES, AND THE NATION DURING 1980

	OFFSTREAM (Total Water Withdrawal) (mgd[1])	Per Capita	Use in each major category (Percentage Distribution)			
			Public	Self-Supplied Industrial	Rural	Irrigation
Louisiana	12,410	2,950.5	4.9[2]	79.0	0.6	17.7
Texas	20,600	1,447.7	18.4	40.4	1.9	40.8
Arkansas	16,000	6,999	1.6	63.8	0.8	31.9
Mississippi	3,560	1,412.1	8.2	62.6	1.4	27.8
United States	452,000	1,995.2	7.5	57.6	1.2	33.2

Source: U.S. Department of the Interior, Geological Survey: Estimated Use of Water in the United States in 1980, Table 18, p. 40.

[1] MGD = Millions gallons per day.

[2] Proportions will generally not add to one hundred because of independent rounding.

TABLE 2

PUBLIC SUPPLIED FRESH-WATER USE IN LOUISIANA, NEIGHBORING STATES, AND THE NATION DURING 1980

	Total Public Use (mgd)[1]	Per Capita[2] (mgd) Use (grd)[3]	National Rank
Louisiana	610	192	
Texas	3,800	335	
Arkansas	260	155	
Mississippi	290	147	
United States	34,000	183	

[1] Millions gallon per day.

[2] Includes only population served by either private or public water suppliers.

[3] Gallons per day.

TABLE 3

SELF-SUPPLIED INDUSTRIAL WATER USE
Total, by Category, and Per Capita in Louisiana, Neighboring States and the United States during 1980

	Total Use of Self-Supplied Industrial (mgd)[1]	Thermo-electric Use (mgd)	Per Capita (mgd)	Other Self-Supplied Industrial (mgd)	Per Capita (msd)
Louisiana	9,800	6,080	1,445.6	3,730	886.8
Texas	8,300	6,490	456.1	1,830	128.6
Arkansas	10,000	9,700	4,243.2	510	223.1
Mississippi	2,200	1,600	634.7	610	242.0
United States	260,000	215,000	949.0	45,300	200.0

[1]Million gallons per day.

TABLE 4

TOTAL RURAL, LIVESTOCK, AND DOMESTIC WATER IN LOUISIANA, NEIGHBORING STATES, AND THE UNITED STATES DURING 1980

	Total Rural (mgd)[1]	Livestock (mgd)	Domestic (mgd)
Louisiana	72	18	54
Texas	400	270	130
Arkansas	110	61	51
Mississippi	49	21	27
United States	5,600	2,200	3,400

[1]Million gallons per day.

TABLE 5

TOTAL IRRIGATION WATER USE AND PER-ACRE USE IN LOUISIANA, NEIGHBORING STATES, AND THE UNITED STATES DURING 1980

	Total Irrigation (mgd)[1]	Per-Acre Use
Louisiana	610	2,973
Texas	8,400	1,091
Arkansas	5,100	2,833
Mississippi	980	2,042
United States	150,000	2,586

[1]Million gallons per day.

TABLE 6

ANNUALIZED PERCENTAGE INCREASE FOR DIFFERENT WATER USER IN LOUISIANA FROM 1960-2020

	1960-1980	1980-2020
Public Supply	4.14%	2.06%
Industry[1]	2.01%	1.87%
Power Generation	6.70%	1.75%
Agriculture	3.58%	1.12%
Total Water Use		

Agricultural Uses

A differentiation exists between the terms *rural* and *irrigation*. Rural use is water used in suburban or farm areas for domestic and livestock needs. The percentage of livestock needs to total rural use is presented in *Table 4*. Louisiana clearly has a much lower rate of its rural water use dedicated to livestock than do the other four states and the nation. Irrigation water involves the application of water to assist in the growing of crops and pastures, or in maintaining recreational lands. A per-acre use of irrigation water for the states and the nation is presented in *Table 5*. Not surprisingly, Louisiana has a larger than average use of water per acre. This high usage is caused by the types of crops grown in the state. The principal high-water-use crops in Louisiana are rice and sugar cane.

Water Demand Projections

Future water demand estimates have been provided by Gulf South Research Institute's (GSRI) most comprehensive study of water trends in Louisiana. In the report, "*Water Supply and Demand in Louisiana (1980-2020)*," GSRI provides data on water demand quantities for the 1960-1980 period and then makes forecasts for the period 1980-2020. These estimates are shown in *Table 6*.

GSRI foresees only the *industrial water* use increasing its growth rate in the next decades as compared to the previous two. The rate of growth in water demand for *public-supply*, *power generation*, and *agricultural* purposes is expected to decrease. In fact, the increase in agricultural water use will occur only if there is an increase in rice production.

The GSRI report also examines water needs throughout Louisiana, and divides the state into the six water resource planning areas

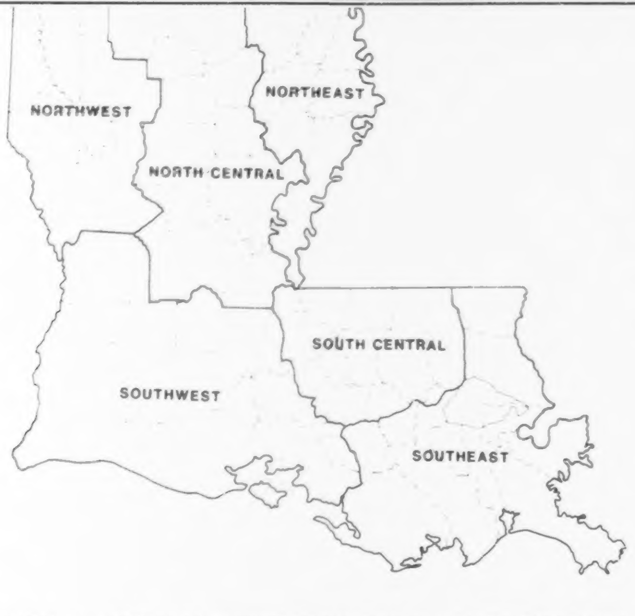


FIGURE 1. LOUISIANA WATER RESOURCE PLANNING DISTRICTS

(WRPAs) shown in *Figure 1*. GSRI differentiates water demand for each group by whether or not it is obtained from *surface* or *ground* water. The projected water use by group for WRPAs is presented in the report. It should be noted that surface water is generally the significant source. With only one exception, *energy power* in the Southwest, projections indicate demand for surface water will either maintain its current level or increase.

Water Supply

Water supply should not only be measured by the quantity available in the region but by the physical, legal, and economic accessibility the user has to the water, and the quality of the water and the quality need of the users. The GSRI report also provides a comprehensive study of regional water supply throughout Louisiana. Following is a summary of the report's findings on each WRPA.

Northwest Louisiana depends mostly on surface water. The surface water for the Shreveport area is inadequate, and a new source is needed. The Red River is not an acceptable alternative because of its high levels of dissolved chlorides; and water levels are declining in the region's main ground water source: the Sparta Aquifer.

North Central Louisiana relies on both surface and ground water. The surface water source for the Monroe area is the Bayou de Siard Reservoir, supplemented by Bayou Bartholomew and the Ouachita River. Pumping costs for Bayou Bartholomew are increasing, while the quality of water from the Ouachita River is below that of Bayou de Siard. Since the main ground water source is the Sparta Aquifer, the region has similar problems to those affecting the Northwest WRPA.

Northeast Louisiana is the only WRPA to rely mainly on ground water sources. A major problem in this area is the seasonal shortage of surface water which affects irrigation. This is the only WRPA expected to encounter major quantity and quality problems in both surface and ground water. The relaxed control of water laws in this *water-rich* region may leave it vulnerable to a water-crisis in the next fifty years. Surface water tends to have salt intrusion causing quality problems during low flows. The Chicot Aquifer is the major source of public supply water. There is potential water contamination in this ground water source.

The GSRI study did not find major problems in Central Louisiana. This certainly does not imply that water-control methods are not needed in this area. Southeastern Louisiana depends heavily on surface water. The Mississippi River is a major source of *public supply* water. Potential pollution of surface water may affect public supply.

Jurisdiction

Legal rights to water located on or below a land tract is a complex problem. Private vs. public property is a main issue underlying the various legal alternatives a state may impose. Water use laws in Louisiana, as elsewhere, are separated into surface and ground water categories, even though the two are connected through the hydrologic cycle.

Surface Water—Professor James M. Klebba of Loyola University at New Orleans, has prepared a comprehensive study on Louisiana water resource legislation. He points out Louisiana, unlike its adjoining neighbors (Texas, Arkansas, and Mississippi), generally follows the *riparian doctrine* with regard to surface water rights. The underlying concept behind the riparian doctrine is that the owner of land along a stream (riparian) has certain inherit rights to the use of the water in that stream. The riparian—or the owner of the adjacent land—according to this doctrine, has the right to exclude, or to limit the use of the water by non-riparians.

Louisiana's laws do not specify the actual legal rights of either the riparian or the non-riparian, so disputes must be settled by the courts on a case-by-case basis. Klebba convincingly argues that the court system has not been inundated with cases involving water rights because of Louisiana's historical abundance of water. He predicts, however, that as the state begins to experience increasing competition for water (brought on by such factors as increased consumption and higher pollution levels) it may modify its strict adherence to the riparian doctrine.

Ground Water—Klebba points out Louisiana adheres to the minority *absolute ownership* (or English) rule regarding ground water, as opposed to the *reasonable use* (or American) rule. Absolute ownership allows the landowner to pump any amount of water from a source located under his property regardless of the consequences to nearby landowners. Louisiana's water use laws, therefore, preserve the landowner's right to use the water located on or under his property without the need of strict governmental approval. How do these laws compare with those of the state's neighbors? Klebba provides the following summary.

Mississippi and Arkansas

Mississippi was the first eastern state to break with the riparian doctrine and establish an appropriation system for surface water generally based on the western model. Riparian users in that state operate under a *grandfather* clause that allows them to use the same quantity of water as they did before the effective date of the 1956 appropriation statute. These grandfather rights, however, as well as rights determined under the new permit system, may be lost by a period of none-use. Arkansas legislators, like those of Mississippi, have refuted the *riparian doctrine*, while including a similar provision for grandfather rights. Water use in the state, though, is strictly governed by a water resource board.

Texas

Historically, the *riparian doctrine* had been in existence in some areas of the state. In some cases they depended entirely on the source of two landowner's original grant. A 1967 Texas statue, however, restricted the exercise of riparian rights to either the use of water for rural purposes, or for non-rural purposes. The rights are restricted to water actually used by a riparian during certain specified years. Louisiana is the only state in the area to still adhere to the riparian doctrine. The other states have either abandoned or have curtailed riparian law. The question is now being asked whether or not Louisiana should follow the examples of its neighbors.

The data in *Table 1* shows water use in Mississippi and Louisiana to be similarly distributed among major users even though one is a riparian doctrine state and the other is not. Even though Louisiana adheres to riparian law, it ranks first in the per capita consumption of *public-supplied* water among the states located in the Mississippi Valley. This information does not lead one to the conclusion that the state should preserve its water laws, but it does suggest further studies ought to be undertaken.

The Price of Water

Houma residents attentively followed a series of prank calls in early 1982 that claimed their *drinking* water supply had been contaminated with cyanide. Had the threats materialized, Houma residents would surely have been willing to pay a higher price for water, so long as it was guaranteed safe.

Unless water use is wisely managed, most areas in the state will certainly experience unnecessary water shortages in the future. The cost of water to the consumer should reflect more adequately the costs of purifying, obtaining, and protecting it. Environmental impact costs, a hidden cost, if left untouched in the immediate future will lead to drastic changes to the current cost of water. Allowing the price of water to remain unnaturally low by not including the cost of decontamination, for instance, eventually may bring on such a shortage of acceptable quality water supply that the market adjustment might increase the price of water drastically.

Although the evidence is far from being complete, one possible example of the cost borne by a poorly managed and monitored water supply was reported in a study by the *Governor's Task Force on Environmental Health*, which pointed out that rectal cancer may be associated with the intake of polluted drinking water. Alhough at present the risk is small, according to the report, the effects of polluted water are still not clearly identified. Nevertheless, failure to account for them may leave us with discovering the effects after irreparable damage already has been done.

Another example of the difficulty of assessing the true cost of water use can be observed in *Figure 2*. It describes the intricate labyrinth of state agencies water suppliers must deal with.

Any failure to ignore hidden costs for expanded periods of time will generally lead to drastic market price adjustments. Allowing the price of water to remain unnaturally low by not including the cost of decontamination, for instance, eventually may bring on such a shortage of acceptable-quality water supply that the market price might increase to unattainable levels had the problem been corrected.

Louisiana clearly still possesses an above average supply of water, although the price of water can be expected to become a growing issue until it includes the true costs of assessing this vital resource and the return of it into the environment. Until we are willing to pay the full-price of water, we cannot guarantee future generations an ample supply.

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Michael M. Liffmann

Getting Competitive: Port Development in Louisiana

Ports perform the vital role in Louisiana of serving as strategic elements in the state's economic development efforts. The contribution of waterborne commerce to Louisiana's economy and transportation network is not merely a temporary phenomenon. The ability of the port system to handle future ocean, coastal, and river commerce is vital to the well-being of the state's economy and sustained economic growth.

No other mode of transportation involves more difficulties in definitions of technical vocabulary than does water transportation. Terms that seem interchangeable often have different meanings. The terms *port* and *terminal facilities* are examples. It is accepted commonly within the industry that *ports* are locations containing several *terminal facilities* for loading and discharging commodities. *Terminal facilities* include the waterfront buildings, structures and equipment used for handling waterborne cargo.[1]

The understanding of what constitutes a port in Louisiana depends upon whether or not there is public direction or management. By and large, cargo facilities under the direction of public port commissions are *ports*. Privately-owned and specific-use facilities, regardless of their size, are referred to as terminals. This discussion centers on public port commissions established to regulate and develop commerce and traffic within geographically specified port areas.

Louisiana's Ports

Forty-four port commissions, located along a 5,000-mile network of navigable waterways (*Table 1*), have been created by state law to foster economic development. Thirty-eight of these commissions are considered active (that is, the ports are operative or development activities are currently underway), with most maintaining administrative staffs and exercising authority over one or more ports. Six are inactive; and, although state legislation has been enacted, no facilities have been developed or planned.

The state's seven deep-draft ports—New Orleans, Greater Baton Rouge, Lake Charles, South Louisiana, Plaquemines Parish, St. Bernard, and the Louisiana Offshore Oil Port (*LOOP*)—are the mainstays of Louisiana's shipping industry. Deep-draft ports are accessible to ocean-going ships, have appropriate terminal accommodations and water depths in their harbor channels, and have terminal facilities capable of handling vessels with drafts of more than twenty feet.

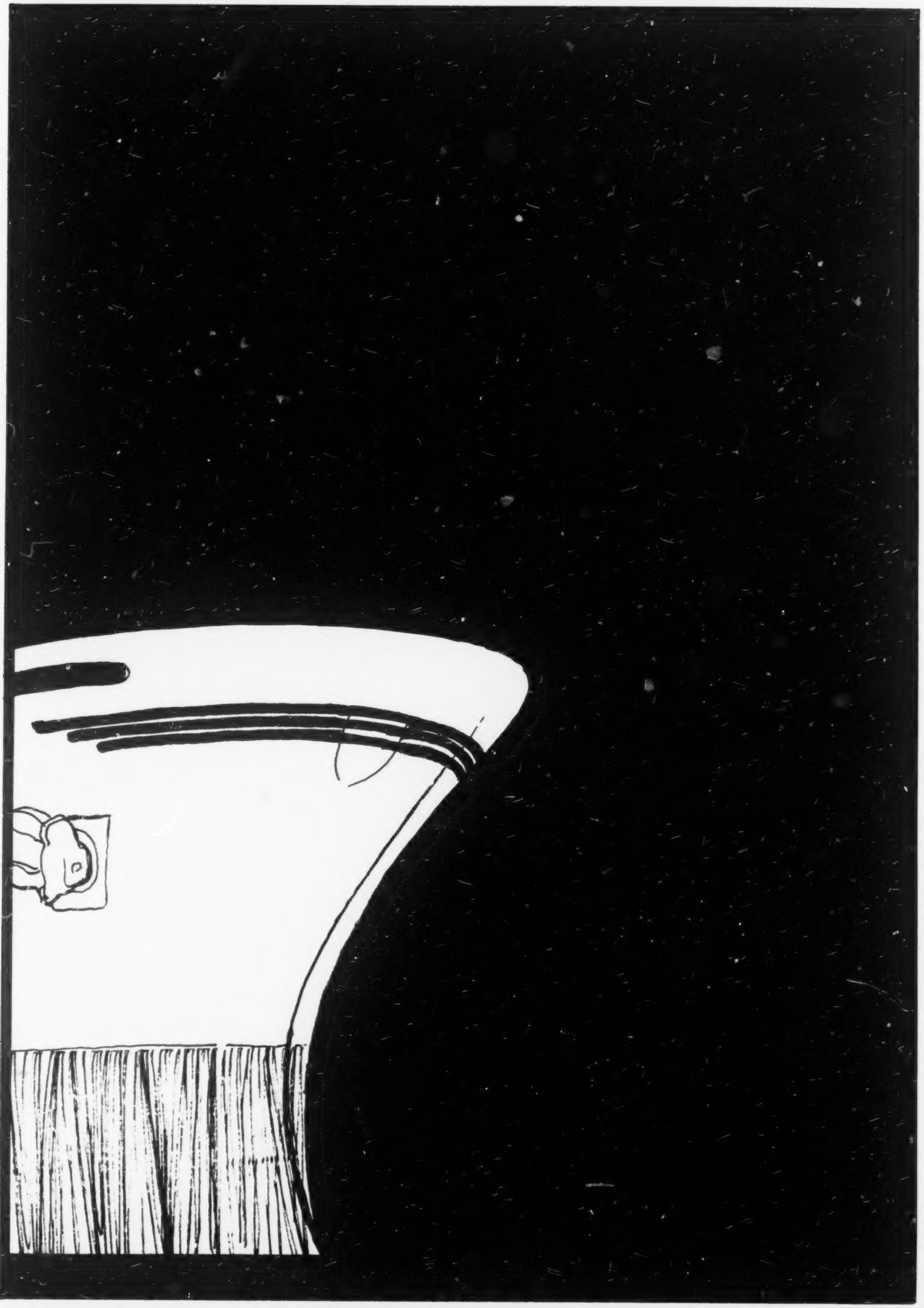
Significant contributions to the state's economy are provided also by its thirty-one active smaller ports located throughout Louisiana. Fifteen of these are situated within the coastal zone, serving primarily the oil and gas and fishing industries. Most channels can accommodate shallow-draft vessels of twelve feet or less, but several channels have been dredged to depths of twenty feet. The sixteen active inland ports are (or will be) served by towboats and barges moving through shallow-draft inland river navigation channels. Most of the inland navigation channels can accommodate vessels with maximum depths of nine feet.

TABLE 1

DEVELOPMENT LEVEL OF LOUISIANA PORT COMMISSIONS, OCTOBER 1983

DEVELOPMENT LEVEL	DEEP-DRAFT PORTS	COASTAL PORTS	INLAND PORTS
V. Private cargo terminals and public facilities existing	New Orleans Greater Baton Rouge Lake Charles	Greater Lafourche Abbeville Iberia West St. Mary	Lake Providence Madison
IV. Private cargo terminals existing; public facilities planned	South Louisiana Plaquemines St. Bernard	Mermentau Terrebonne Morgan City South Tangipahoa	Greater Ouachita Morehouse Avoyelles Vidalia
III. Private cargo terminals existing; public facilities not planned	L.O.O.P./L.O.T.A.	Greater Jefferson Vinton East Cameron Twin Parish Jennings West Cameron West Calcasieu	Jonesville Greater Krotz Springs Pt. Coupee Tensas Columbia Concordia
II. Legislation enacted; port planning underway			Caddo-Bossier Natchitoches Rapides Red River
I. Legislation enacted		Lafayette Grand Isle Assumption St. Tammany	Grant Union

Source: LSU Ports and Waterways Institute



Port Development

Regional responses in Louisiana to port development have reflected fundamental differences in missions and in the organizational, managerial, and financial resources available for port development. The primary goal of Louisiana's deep-draft ports is to encourage the movement of international waterborne commerce through their facilities, while the state's smaller ports are primarily charged with responsibility for the encouragement of economic activities within their boundaries.

Louisiana's deep-draft ports have focused their development on the stimulation of waterborne commerce (particularly foreign). The lower Mississippi River deep-draft port complex stretches 234 miles from Baton Rouge to the Gulf of Mexico. It has developed largely through its role as a transshipment center for both the import and export of foreign goods.

This port complex handled 380 million tons of waterborne cargo in 1981. Of this amount, nearly 83 million tons were in foreign commerce, which represented more than 20 percent of the nation's total foreign waterborne trade. This figure represents a quadrupling of the 1971 volume and a doubling of Louisiana's share of the total foreign waterborne commerce in the United States.[2]

Comparative waterborne commerce statistics for the state's deep-draft ports are only available for the three major deep- draft ports of New Orleans, Greater Baton Rouge, and Lake Charles.[3] Figures presented in Table 2 reveal these ports had a combined 1981 freight traffic exceeding 281 million tons—a 44-percent increase over 1972's totals. The principal commodities shipped through these ports in 1981 appear in Table 3.

The relative importance of foreign freight traffic is depicted in Table 4. Close to forty percent of the cargo that crossed the docks of these three ports in 1981 represented foreign trade. Significant increases in the

TABLE 2

**Total Tons of Freight Traffic,
Louisiana's Three Major Deep-Draft Ports
for Selected Years
(Thousands of Short Tons)**

Port	1972	1975	1981
New Orleans	125,719	140,409	188,851
Greater Baton Rouge	52,903	60,226	72,045
Lake Charles	17,029	17,463	20,706
Total	195,631	217,098	281,602

Source: Department of the Army, Corps of Engineers. Waterborne Commerce of the United States, Part 2. 1981.

TABLE 3

**PRINCIPLE COMMODITIES
SHIPPED THROUGH LOUISIANA'S
THREE MAJOR DEEP-DRAFT PORTS, 1981**

(Thousands of Short Tons)

Commodity	New Orleans	Greater Baton Rouge	Lake Charles
Crude Petroleum	19,835	12,244	8,389
Corn	35,749	1,076	167
Coal and Lignite	26,016	4,522	—
Residual Fuel Oil	16,422	6,562	1,429
Soybeans	17,752	3,349	1,014
Wheat	14,742	1,393	83
Animal Feeds	7,024	4,602	18
Gasoline	5,733	4,244	1,193
Basic Chemicals	2,233	6,200	872
Distillate Fuel Oil	3,157	3,799	748
Percent of Total Freight Traffic	79%	67%	67%

Source: Department of the Army, Corps of Engineers. Waterborne Commerce of the United States, Part 2. 1981.

TABLE 4

**Total Foreign Freight Traffic,
Louisiana's Three Major Deep-Draft Ports, 1981**

(Thousands of Short Tons)

Port	Imports	Exports	Total
New Orleans	20,663	59,490	80,153
Greater Baton Rouge	11,312	14,372	25,684
Lake Charles	4,717	2,930	7,647
Total 36,692	76,692	76,792	113,484

Source: Department of the Army, Corps of Engineers. Waterborne Commerce of the United States, Part 2, 1981.

volume of foreign tonnage have been forecast for the state's deep-draft ports. Grain and coal exports, in particular, are expected to increase through the lower Mississippi River ports.[4]

Port of New Orleans

The Port of New Orleans is one of the world's premier ports. It ranked first among U.S. ports in reported tonnage in 1981. Nearly 189 million tons of cargo were moved through port facilities during the year of which over eighty million tons were in foreign freight traffic. The port includes nearly 300 piers, wharves and docks located on both banks of the Mississippi between approximately miles 81 and 115 above Head of Passes.

New Orleans is at the junction of 19,000 miles of inland waterways created by the Mississippi River, its tributaries, and the Gulf Intracoastal Waterway. An estimated 130,000 barges yearly pass through the port from as far north as Minneapolis/St. Paul, as far east as Pittsburgh, and as far west as Omaha. In fact, at any one time approximately 10 percent of the nation's barge fleet is in New Orleans being loaded, waiting to be unloaded, or ready to be returned for reloading.

Approximately 50 percent of all general cargo to and from the Port of New Orleans is moved by barge, 30 percent by rail, and 20 percent by truck. Nearly 5,000 ships operated by more than 100 steamship lines also call at the port's berths each year.

Sixty percent of the nation's farm products are grown within the port's vast Mid-American hinterland. This area shipped nearly one-half of the total U.S. grain exports through elevators on the lower Mississippi River, including New Orleans, in 1981. Coal, petroleum products, grain, (primarily corn, soybeans, and wheat), and animal feeds are the principal export commodities. Crude petroleum and iron and steel products are among the major imports.

The Board of Commissioners of the Port of New Orleans (also referred to as the Dock Board) sets policies and makes all major decisions affecting the port. It was formed in 1896 and was the first of its kind in Louisiana. Seven commissioners are appointed by the governor for five-year terms from a list of nominees submitted by several organizations.

Port of Greater Baton Rouge

The Port of Greater Baton Rouge is located at the head of deep-draft navigation on the Mississippi River and along both banks in East and West Baton Rouge, Iberville, and Ascension parishes. Its governing authority is the fifteen-member Greater Baton Rouge Port Commission—created in 1952 and charged with responsibility for regulating and developing traffic and commerce within its jurisdiction. Seventy private and public piers, docks, and wharves are within the port's limits, which extend from the vicinity of the Sunshine Bridge below Burnside to some twenty miles north of the U.S. 190 Bridge.

Combined tonnage of the private and public terminals (approximately seventy-two million tons in 1981) makes the Port of Greater Baton Rouge the fifth-largest in the nation. Principal commodities moved through the private facilities include crude petroleum, fuel oil, and petrochemicals, while public facilities transship sizable volumes of grain, coal, and forest products. A 40-percent increase in traffic demonstrates the healthy pattern of growth the port area has experienced during the past ten years.

Shipping on the Mississippi between Baton Rouge and the Gulf of Mexico is expected to more than double in volume by the end of the century. The recent recession, which resulted in a decline in waterborne commerce throughout the area, did not alter this expectation, but brought on a renewed concern regarding the delicate traffic allocation equilibrium existant in the nation's highly competitive port system.

These facts have prompted the Port Commission to give serious consideration to both careful planning of future port developments and increased marketing of the port's facilities and services. A comprehensive development plan is being developed to provide recommendations regarding future courses of action—including marketing strategies. This plan will make its recommendations in the form of a detailed, five-year plan of action, and will include a clear outline of directions for long-term development.

The Port of Greater Baton Rouge has a number of advantages which should prove beneficial in its efforts to increase its market share of waterborne cargo. These benefits include the following:

1. A location attractive to Mississippi River System traffic because of lower barge rates than down river or for other Gulf ports;
2. Excellent railroad connections with sufficient capacity reserves and services provided by three major carriers (the Missouri Pacific Railroad, Kansas City Southern Lines, and the Illinois Central Gulf Railroad);
3. Efficient facilities for cargo storage and transfer with modern terminals, including midsteam handling facilities for most types of cargos; and,
4. Sufficient land for waterfront and back-up area development, including possibilities for locating new water-related industries.

Port of Lake Charles

The Port of Lake Charles (Lake Charles Harbor and Terminal District) is located some thirty-two nautical miles from the Gulf by way of the Calcasieu River and Pass, the port's deepwater entrance. Commerce and traffic within an area of two hundred square miles located entirely within Calcasieu Parish, and including the cities of Lake Charles and Westlake, are regulated by the

District, which was formed in 1924. Administration of the port is under the direction of a five-member board of commissioners. Seventy-two private and public waterfront facilities generated a volume of 20.7 million tons of traffic in 1981. This figure made the Port of Lake Charles the twenty-fourth largest in the nation and represented a 22-percent increase in volume since 1972. The principal cargoes moved through these facilities were crude petroleum, coke, residual fuel oil, gasoline, and soybeans.

The port is ideally situated to be a major center for ocean and inland transportation. The Calcasieu Ship Channel, which provides the ocean access, is crossed by the Gulf Intracoastal Waterway (GIWW) about eleven miles below Lake Charles. The GIWW provides a link to the Sabine-Neches Waterway to the west. Three railroads (Kansas City Southern, Missouri Pacific, and Southern Pacific), along with a host of motor carriers, offer a full range of land transportation services to the port's hinterland.

The general cargo area consists of eleven modern transit sheds that can accomodate ten deep-draft vessels at once and provide nearly one million square feet of covered space of the waterfront. Lake Charles also provides the largest public warehousing in the state. More than 500,000 square feet of warehouse space are available for long-term storage.

Smaller Ports

Most smaller Louisiana coastal and inland port communities have sought to develop their ports through industrial growth. Their intent is to stabilize and diversify the local economy, increase community income, and create employment opportunities. A majority of the state's thirty-one coastal and inland ports also are involved—or intend to become involved—in promoting industrial development by such means as the sale or lease of industrial land to private businesses or through the operation of port-industrial parks.

The state's smaller ports also are governed by port commissions. Their jurisdiction is usually along geo-political boundaries (parishes, wards, etc.) and the number of commissioners per port ranges from five to thirteen. A large majority of the commissioners are appointed by the parishes and municipalities, and only a few are appointed by the governor. Only one commission, the Greater Lafourche Port Commission, obtains its members through an election. Most port commissioners serve terms ranging from four to six years. Commissioners of the Morgan City Harbor and Terminal District serve for nine years.

Legislation has enabled most of these port commissions to levy taxes and issue industrial development bonds to maintain industrial acreage alongside public facilities. Lake Providence, Iberia, West St. Mary, Fourchon, Abbeville, and Madison Parish are prime examples of ports developed with industrial growth in mind. A broad range of manufacturing activities can be found at these including oilfield equipment fabrication, seafood processing, chemical manufacturing, vessel construction and repairs, grain processing, machine fabrication, forest products, industries, and cement manufacturing.

Accurate annual tonnage figures for Louisiana's smaller ports are not available. Many coastal port managers, in fact, believe such statistics would be useless in revealing the true nature of their activities. Their ports primarily serve the coastal marine and offshore industries, which use port facilities as staging areas for their vessels and for the shore-based fabrication of items of high value and low volume, such as offshore rigs, platforms, and boats. Tonnage figures are not accurate measures of such port activities.

Statistics from the U.S. Army Corps of Engineers, however, indicate the state's thirty principal shallow-draft waterways handled more than 25 million tons in 1981. More than 40 million tons of cargo that moved on the Gulf Intracoastal Waterway in 1981 also either originated from or was destined for Louisiana.[5]

Several inland port commissions have limited their missions to serving the agricultural interests of their areas. Terminals and related facilities at the ports of Jonesville, Columbia, and Tensas Parish serve exclusively as grain storage and transshipment centers. More than a dozen small but important fishing ports serve the state's vital fishing industry. Over 1 billion pounds of shrimp, menhaden, oysters, and other species are offloaded at ports such as Cameron, Lafitte, Grand Isle, Dulac, and Delcambre at an ex-vessel value averaging $200 million.

Federal and State Funding

There has been a growing concern in recent years regarding the general condition of Louisiana's public ports. Much of the discussion centers on the need to revitalize some ports, develop new ports, and improve commercial navigation on key waterways. Another consideration is that the traditional division of responsibility among the agencies of federal, state, and local government involved in ports and waterways development is changing. A variety of federal proposals probably will produce a dramatic shift in these responsibilities, with increased financial burdens on the maritime industry, and state and local government.

The federal government traditionally has been responsible for the construction, maintenance, and operation of the nation's waterways. Development of shoreside cargo handling facilities primarily has been assumed by the states, local port commissions, and the private sector.[6] Federal funding between 1977 and 1982 for Louisiana navigational improvements and ports and terminals projects is estimated to have exceeded $950 million (Table 5). The U.S. Army Corps of Engineers alone spent more than $700 million on Louisiana navigation projects during the period (Figure 1).

TABLE 5

ESTIMATE OF FEDERAL FUNDING FOR LOUISIANA NAVIGATION IMPROVEMENTS AND PORT TERMINAL PROJECTS, FISCAL YEARS 1977 THROUGH 1982
($000)

FEDERAL AGENCY	1977	1978	1979	1980	1981	1982	TOTAL
U.S. Army Corps of Engineers[1]	$62.037	$98.650	$125.648	$137,417	$168,303	$100,366	$692,421
Economic Development Administration[2]	5.618	8.987	9.240	11.294	7,210	1,112	43.461
U.S. Coast Guard[3]	N.A.	N.A.	N.A.	N.A.	34,450	34,584	N.A.
Ozarks Regional Commission[4]	402	—	—	217	—	—	619
Coastal Energy Inpact Program[5]	N.A.	265	55	1.672	N.A.	104	N.A.

Note: Dollar estimates were sought but not obtained from the following Federal Agencies: Maritime Administration, Housing and Urban Development (Urban Development Action Grant and Community Development Block Grant programs) and Environmental Protection Agency. N.A.—Not Available.

Sources [1] U.S. Army Corps of Engineers. *Annual Report FY 82 of the Chief of Engineers on Civil Works Activities*. Washington, D.C.
[2] Economic Development Administration. Annual Reports FY 1977 through 1982. Washington, D.C.
[3] Telephone Conversation. Lt. Tim Sullivan, U.S. Coast Guard (New Orleans). December, 1983.
[4] Telephone Conversation, Ms. Shelley Wold, University of Arkansas (Little Rock), December, 1983
[5] Telephone Conversation, Mr. Steven Schutz, Department of Natural Resources (Baton Rouge), December, 1983.

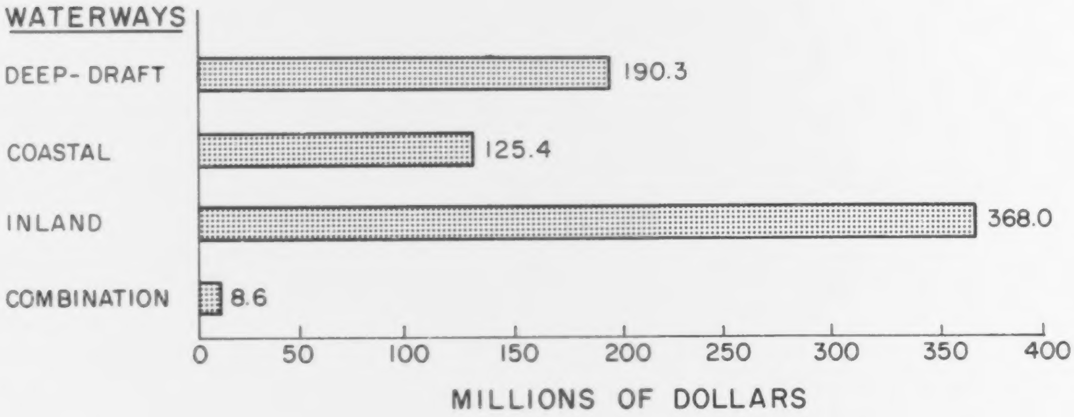
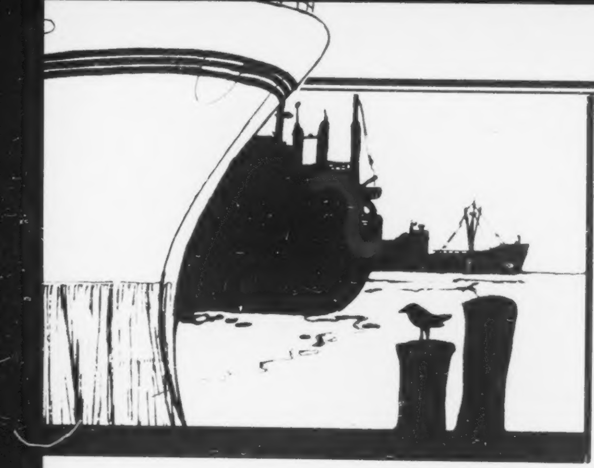


FIGURE 1
U.S. ARMY CORPS OF ENGINEERS,
COST OF NAVIGATION IMPROVEMENTS
LOUISIANA, FY 1977-1982



Five waterway projects accounted for eighty percent of the Corps' expenditures in Louisiana during the 1977-82 period. These included construction of the Red River Waterway ($300 million), maintenance of the Mississippi River from Baton Rouge to the Gulf of Mexico ($143 million), Gulf Intracoastal Waterway ($51 million), Calcasieu River and passes ($31 million), and the Mississippi River-Gulf Outlet ($29 million).[7]

Although information is incomplete, funding for Louisiana ports, waterfront industrial parks, and terminal projects by other federal agencies is estimated at $50 million for the period. The largest share of these funds was obtained from the Economic Development Administration (over $40 million). The U.S. Coast Guard additionally estimates expenditures of nearly $70 million in fiscal years 1981 and 1982 for operations associated with marine safety throughout Louisiana. The six-year estimate is placed at $200 million.

Louisiana spent nearly $200 million to finance landside port facilities and cargo terminals during the 1977-82 period. General obligation bonds were the main source of funding ($115 million) followed by revenue bonds ($75 million) and the state's general revenue fund ($9.5 million).[8] Self-generated funds have enabled the ports of New Orleans and Lake Charles to carry out additional capital improvements. New Orleans port officials estimate between $4 million and $8 million can be generated annually for capital facilities investments. Lake Charles can produce more than $3.5 million and Greater Baton Rouge up to $1 million dollars per year for similar purposes.[9]

State ports and terminals funded between 1977 and 1982 are shown in Table 6. The American Association of State Highway Transportation Officials (*AASHTO*) report indicates the state funding for the Port of New Orleans exceeded $150 million, while six coastal ports obtained nearly $23 million, and Lake Charles received almost $20 million. The only inland port to obtain state funding was Caddo-Bossier, for which funds were dedicated primarily to real estate purchases.[10]

State Port Development Needs

The *Mid-America Ports Study* projected a need within Louisiana for 461 new terminals and the development of 3,620 acres of land by the year 2000 to accommodate increases in waterborne commerce through the state's ports. The study forecasts the magnitude of this investment as greater than $4.0 billion. It predicts major investments by the private sector in facilities to handle petroleum products, coal, grains, fertilizers, and chemicals. Additional and substantial funds will be needed, however, to construct public facilities that support water transportation.[11]

There is a critical need to define Louisiana's expected future public investment requirements for ports and waterways, in light of the federal government's reduced role in the future, the state's desire to revitalize and develop its public port facilities, and steadily-increasing port requests for capital outlay appropriations. The reduced federal role has been amply documented, and many of the measures designed to activate this retreat already have been implemented. Examples of this new federal stance include waterway user charges and a vast array of proposed cost-sharing and cost-recovery charges.

A recent study by the Louisiana State Planning Office reviewed the capital adequacy for infrastructure improvements through the end of the century. Although data were incomplete for ports and waterways, the study concluded Louisiana's total infrastructural investment needs exceeded revenues by nearly $200 million.[12] Statistics compiled by the Office of the Governor's Budget Office also point toward ever-widening gaps between ports capital outlay requests and authorized expenditures (Figure 2).[13]

The Port of New Orleans, the nation's largest in terms of total ton-

TABLE 6

LOUISIANA FUNDING OF PORT AND TERMINAL PROJECTS
FY 1977-1982

($000)

	Total Funding		% of Category		% of Total	
DEEP-DRAFT	$172,534		100.0		86.5	
New Orleans		153,174		88.8		76.8
Lake Charles		19,250		11.1		9.7
South Louisiana		110		.1		*
COASTAL	22,985		100.0		11.5	
Iberia		6,950		30.2		3.5
Greater Lafourche		6,180		26.9		3.1
Terrebonne		2,750		12.0		1.4
West St. Mary		2,415		10.5		1.2
St. Bernard		1,000		4.4		.5
Abbeville		3,690		16.0		1.8
INLAND	4,000		100.0		2.0	
Caddo-Bossier				100.0		2.0
TOTAL	$199,519	—	—	—	100.0	—

*less than .01% of total

Source: AASHTO, *Survey of State Funding of Landside Port Facilities and Cargo Terminals, 1983.*

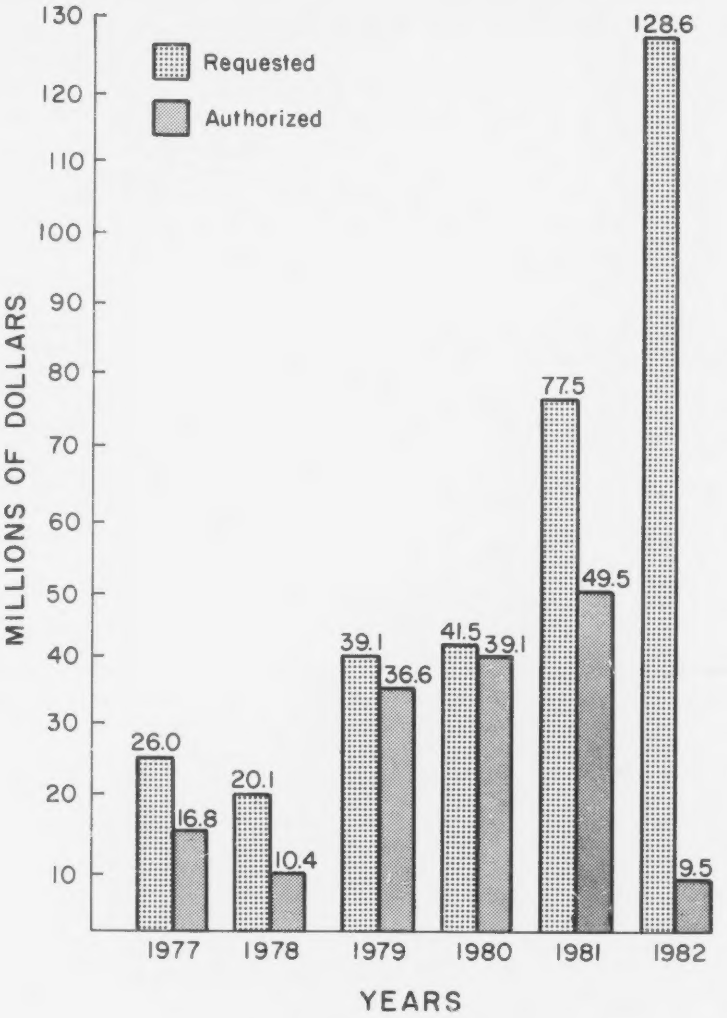


FIGURE 2
LOUISIANA PORTS
CAPITAL OUTLAY REQUESTS/EXPENDITURES
1977-1982

nage, periodically updates its capital facilities program. It estimates a need for $302 million from the state for port capital improvements through FY 1994.[14] Additional requests for state financial assistance are expected within the next few years for several projects, including the following:

1. Further deep-draft port developments along the lower Mississippi River corridor and at Lake Charles;
2. Deepening of the Mississippi River;
3. Port developments along the Red, Atchafalaya, and Ouachita-Black systems, as well as inland ports on the Mississippi River above Baton Rouge and numerous small coastal ports; and,
4. Deepening and widening the Gulf Intracoastal Waterway.

It is probable that in relatively short order the state will have a request backlog of more than $1 billion for ports and waterways improvements.

MICHAEL M. LIFFMANN is assistant director of the LSU Port and Waterways Institute at Baton Rouge.

Endnotes

[1] Wilbur Smith and Associates, *Mississippi Comprehensive IntermodaL Transportation Plan*, (Columbia, SC: Wilbur Smith and Associates, 1982).

[2] Herbert J. Haar, Jr., *"Small Ports and Their Relationship to Deep-Draft Ports."* (Address to the First Annual Louisiana Small Port Conference, Baton Rouge, January 1984.)

[3] Department of the Army, Corps of Engineers, *Port Series*, (Washington, DC: U.S. Army, 1982).

[4] Tipetts-Abbett-McCarthy-Stratton, et. al., *Deep River Study*, (New York: 1983).

[5] U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 2, (New Orleans: U.S. Army, 1981).

[6] American Association of State Highways and Transportation Officials, *"Survey of State Funding of Landside Port Facilities and Cargo Terminals"* (Report), (Washington, DC: AASHTO, 1982).

[7] U.S. Army Corps of Engineers, *Annual Report, FY 1982, of the Chief of Engineers on Civil Works Activities*, (Washington, DC: U.S. Army, 1982).

[8] AASHTO, *op. cit.*

[9] Edward S. Reed, *"Louisiana's Dynamic Ports,"* Louisiana Business Review (Summer, 1982).

[10] AASHTO, *op. cit.*

[11] Tippetts-Abbett- McCarthy-Stratton, et. al., *The Mid-America Ports Study*, (New York, 1980).

[12] Louisiana State Planning Office, *Louisiana Infrastructure, Phase I* (Report), (Baton Rouge, 1983).

[13] Louisiana Office of the Governor, Division of Administration, Budget Office, unpublished information, 1983.

[14] Board of Commissioners of the Port of New Orleans, &"Ten Year Capital Facilities Program—1985/1994", (New Orleans: Port of New Orleans, 1983). ■

BOOK CORNER

Effective Writing: A Handbook for Accountants by Claire B. Arevalo, (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1984); 154 pp.; paper.

The author points out in the preface that *Effective Writing: A Handbook for Accountants* is intended to help accounting students and practitioners improve their writing skills. This book does just that. Claire B. Arevalo explains to the reader the importance of writing in accounting and then takes him in graduated stages to research and report writing. What is nice about this approach is that it is done in a concise, easy-to-read format.

Effective Writing contains eleven chapters which are broken down into four basic writing areas: style, mechanics, correspondence, and reports. Each chapter contains numerous accounting examples to illustrate its discussed points. Incidentally, many of these examples were taken from student papers written in various accounting classes. At the end of each chapter are several exercises as well as suggested answers. This aspect makes Arevalo's book an effective self-study tool for practicing accountants or for students who might wish to refine their writing skills.

—Steven Golen

The Annual Report on Small Business and Competition, (Washington, DC: U.S. Small Business Administration, 1984); 485 pp.; (SBA 1.1/2 : 1984).

"The state of small business in 1983 was very good." This optimistic comment is the first sentence in the third annual report of the U.S. Small Business Administration, submitted to Congress March 1, 1984. The remainder of this lengthy report provides a detailed analysis and related statistical data in support of its thesis that the 1983 economic recovery was attributable to small business.

The report cites an employment increase in small business-dominated industries, and a decline in business bankruptcies by 10.5 percent in 1983 as proof of its contention. It further stresses a rise in the GNP (up 6.1 percent from 1982), which it attributes to an 18-percent increase in productivity by small businesses over 1982.

President Reagan, in a brief report to Congress on the state of small business, attributes the success of small business in 1983 to the lowering of the inflation rate and to lower interest rates. The President also includes cuts in individual and estate taxes, paperwork reduction, and improved regulation for small business as reasons for the progress made by small business in 1983.

The book, which is preceded by the Presidential report, is divided into six chapters followed by five appendices. Each chapter contains a lengthy summary, a detailed treatment of the topic, a conclusion, and an appendix of statistical tables. It provides an overview of the state of small business and covers a number of other pertinent issues, including industrial patterns and size factors, financing patterns, worker characteristics, export trade, and procurement. The appendices cover women- and minority-owned businesses, the development of a small business data base, and federal government export and procurement programs for small business. Statistical tables, which make up the *"chapter"* appendices, are presented on gray paper, making them easily identifiable.

Whether or not the upsurge in the condition of small business'—and, indeed, the nation's economy—is as rosy as this report has painted it, remains to be seen. Regardless, one has to be impressed by the authors' vast array of statistical data. Aside from its value in promoting legislation designed to help small business, the report provides the research community with a wealth of information on small business and the American economy.

—M. S. Bolner

The ABCs of IRAs by William J. Grace, Jr., (New York: Dell Publishing Co., Inc., 1984); 190 pp.; $4.95 paper.

William R. Grace, Jr., in the face of there being 11 million Americans eligible to open an investment retirement account (IRA), has written a clear, simple, and timely book to help the uninitiated investor understand the workings of IRAs. His book points out the inadequacies in the present social security and pension systems, and then lists all the places one may invest IRA dollars. It answers questions about who needs IRAs and how the retirement accounts function.

Grace discusses the desirability of investing in savings, self-directed brokerages, mutual funds, and insurance company plans. He rates each variety according to an individual's age, risk, investment experience, present financial situation, and other retirement coverage. The final section of the book answers the 100 most common questions asked about IRAs. The questions are broken down into four categories: contributions, tax considerations, investments, and distributions.

—M. Agnes Titkemeyer

Arbitration: Promise and Performance edited by James L. Stern and Barbara D. Dennis (Washington, DC: Bureau of National Affairs, Inc., 1984); 292 pp.; $30, cloth.

This book is a compilation of presentations made at the 36th Annual Meeting of the National Academy of Arbitrators at Canada in May 1983.

The presentations are given by members of the organization, management advocates, and union advocates. The topics should interest anyone involved in the labor arbitration process.

The speeches help explain how labor arbitrators perform their duties, and how they make their decisions. These include discussions on the use of grievance arbitration for small claims, management and labor criticisms of the arbitration process, employee substance abuse cases, arbitration cases in mining and professional football, interest arbitration in state and local government, and expedited arbitration. Its footnotes should make this book helpful to the labor arbitrator.

—Lawrence Mann, Jr.

Catalogs

The Federal Technology Catalog—1983, (Springfield, VA: National Technical Information Service, U.S. Department of Commerce, 1984); (PB84-105634/TCH); $23.50.

This catalog describes practical technology selected for commercial potential and promising applications to the fields of computer technology, energy, electrotechnology, engineering, life sciences, machinery and tools, manufacturing, materials, physical sciences, and testing and instrumentation. A source of applied technology, the catalog describes more than a thousand processes, inventions, equipment, software, and techniques developed by and for dozens of federal agencies during 1983.

To order by phone or mail, readers should ask for the*Federal Technology Catalog—1983*, order number PB84-105634/TCH. Send a check to NTIS for $23.50, or furnish their American Express, VISA, or MasterCard number and expiration date to National Technical Information Service, U.S. Dept. of Commerce, 5285 Port Royal Road, Springfield, VA 22161 or phone (703)487-4650.

Louisiana International Trade Directory, (New Orleans: International Trade Mart, Louisiana World Exposition, Inc., and the U.S. Department of Commerce; 1984); $25.

The 1984-85 edition of the International Trade Mart's (ITM) Louisiana International Trade Directory (formerly the Louisiana Foreign Trade Directory) is available at ITM and the International Business Center of the Louisiana World Exposition.

This is the third edition of the directory, and contains listings of more than 2,000 Louisiana exporters and importers, port and steamship services, freight forwarders, air carriers, international banks, trade organizations, and chambers of commerce. Also included are foreign consulates and trade commissioners, U.S. Customs offices, free trade zones, ports, buying agents for foreign governments, and country languages and commercial holidays.

Designated as the *official international trade directory of the Louisiana World Exposition*, the publication is sponsored by ITM, Louisiana World Exposition, Inc., and the U.S. Department of Commerce. The *Louisiana International Trade Directory* is geared for new-to-market individuals as well as experienced commerce executives. It is the most accurate and current source of data for international business and commerce in the state.

Louisiana firms engaged in international trade are listed in the directory with their CEOs or marketing representatives, location, mailing address, products traded, major countries of sourcing and marketing, and SIC product codes.

The *Directory* can be purchased at the International Trade Mart, Suite 2940, 2 Canal Street, New Orleans, LA 70130; and the International Business Center located in the Great Hall (second floor) of the Louisiana World Exposition.

The 1984 International Directory of Executive Recruiters, (Fitzwilliam, NH: Consultants News, 1984); 216 pp.; $27.95.

This new compilation of executive recruiters includes 641 offices of 215 firms in 187 cities of 49 countries and from Angola to Venezuela. The 216-page *International Directory* gives the following information for each firm: revenues, staff size, year founded, industry/functional specialty, fee policy, names of key principals, and U.S. affiliate.

Employers with established or planned overseas operations can use the directory to locate recruiters who can find them the key people they need. Executives or specialists who would like to live overseas sent their resumes to listed firms in hope of a match. Executive search firms use the directory to find affiliates who can handle overseas assignments. To help locate individual recruiters when their company affiliation has been forgotten, the directory cross-indexes 940 partner/principals by name.

In addition to the basic listings, introductory text by leading recruiters clarifies and explains international executive search practices. Not included in this work are United States, Canada, and Mexico, which are covered in the companion *Directory of Executive Recruiters. The 1984 International Directory of Executive Recruiters* may be ordered prepaid from Consultants News, 17 Templeton Road, Fitzwilliam, NH 03447.

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Hsin-Min Tong and Timothy J. Watters

FORUM

The Export Trading Company Act

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The United States' trade position has suffered a gradual erosion in recent years. This decline, along with myriad other domestic economic woes, has prompted the government to seek ways to shore up the nation's faltering foreign trade position. One of the concepts resulting from this search was that of the export trading company. The objectives of this paper are (1) to explain the Export Trading Company Act of 1982 and its ramifications; (2) to discuss the Act's anticipated benefits; and, (3) to examine the concerns expressed by its critics.

Congress passed the Export Trading Company Act (*the Act*) in October 1982. The purpose of the Act is to increase exports by enhancing the competitiveness of American firms with their European and Asian counterparts. This is expected to be accomplished through the creation of export trading companies (*ETCs*), a tool other nations have used extensively for many years.[1]

The Act was passed partly because the United States' share of world trade declined during the 1970s (*Table 1*), and (more importantly) the nation's merchandise trade deficits were persistently high during the past five years (*Figure 1*). The problems caused by the unfavorable foreign trade balance, exacerbated by the recent recession (which left about 10 percent of the American labor force unemployed), attracted widespread attention. Congress and President Reagan thought the Act could help spark the lagging economy. Malcolm Baldrige, Commerce Department secretary, has succinctly commented: *Exports create jobs and export trade companies generate exports.*[2]

Three important parts of the Act are:

(a) General provisions, which provide definitions used in the Act and direct the Department of Commerce to establish an office to promote ETCs;

(b) Antitrust certificate provisions, which enable firms to receive prior clearance for their planned export operations regarding antitrust litigations; ,

(c) Banking provisions, which permit banks to invest in ETCs.

The Commerce Department and the Federal Reserve Board are the two principal government agencies empowered to enforce the law.

Expected Benefits

Many smaller firms do not have sufficient resources for effectively marketing their products overseas.

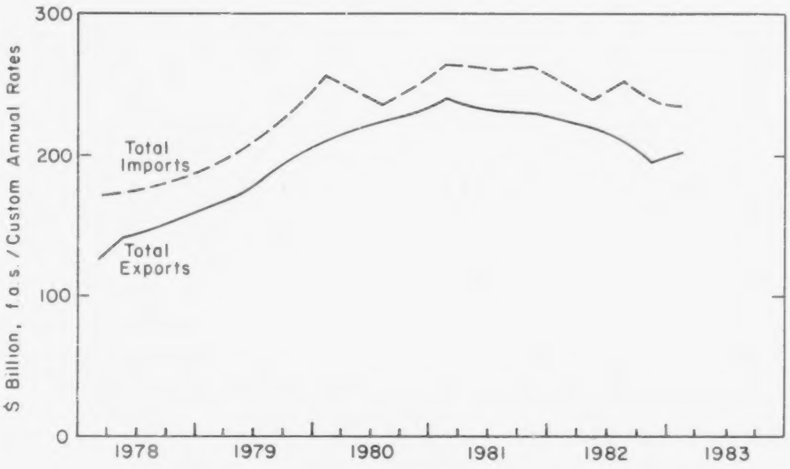

FIGURE 1
United States Share of Total World Markets

TABLE 1

Share of Total World Markets Held by Five Industrial Countries

	1970	1975	1980	1981	1982	1983
			(Percent)			
United States	15.4	13.6	12.1	13.0	12.7	12.4
France	6.4	6.7	6.3	5.9	5.8	5.9
Germany (DBR)	12.1	11.4	10.5	9.8	10.6	10.5
United Kingdom	7.0	5.6	6.0	5.8	5.8	5.7
Japan	6.9	7.1	7.1	8.4	8.3	9.1

SOURCE: U.S. Dept of Commerce, International Trade Adminstration, Current International Trade Position of United States, (June 1984).

Others have shied away from doing business overseas because foreign markets are unfamiliar. The Act will allow these firms the option of joining forces with similar firms to use the services of experienced specialists who can handle all of the complicated details of exporting products. Many firms reportedly chose not to join forces with other firms in exporting before the passage of the Act for fear of violating antitrust laws.[3]

Small- and medium-sized firms individually cannot afford the costs and risks involved in developing the necessary expertise for penetrating foreign markets (such as knowledge of foreign market conditions, customs, and laws). The government can offer this benefit to a large number of firms at low rates, since the costs of these services can be spread among many firms. A benefit offered by the Act to smaller companies, for instance, is a variety of contacts in foreign nations that otherwise would not be available to small exporters.

Two important aspects of the Act are that it promotes active involvement by banks, and it will provide exporters with new opportunities for obtaining export financing. This is becoming increasingly important as many overseas customers are finding it increasingly difficult to locate hard currencies with which to pay for imports. The banking provisions of the Act will help improve American efforts in overseas markets where our firms face competitors able to offer financing packages supported by foreign governments and banks.

Countertrading is a benefit made possible by ETCs through the provision of more comprehensive financing packages. A lack of hard currencies causes many nations to require that imports be paid for, at least in part, with locally-produced products. An ETC will be in much better position to deal with the marketing of these goods than would a small firm, which typically is inexperienced in international business.

The Act was designed primarily to help promote the exports of smaller firms; however, larger firms also can take advantage of the opportunities it offers. General Electric (GE) established a trading company in 1982. Its international marketing network, developed over the years, is comprised of 765 distributors in 140 countries, more than 120 affiliated companies in 45 countries, field sales personnel in 55 nations, and 156 service shops in 63 nations.[4] GE also has extensive experience in dealing with the maze of United States export regulations and the even greater myriad of foreign import regulations. Thus, their expertise in foreign trade and their multitude of contacts overseas placed GE in an excellent position to help smaller United States manufacturing firms export their products.

The giant corporation's position is enhanced by its strong financial position, which allows GE to put together complete financing packages. GE predicts its trading company will be exporting two billion dollars worth of United States products annually by 1987. More than 50 percent of this volume is expected to be in products made by other companies.[5]

Critics' Concerns

The major critics of the Act during its congressional debate were the Federal Reserve Board (the Fed) and Senator William Proxmire (D-WS). The Fed and Proxmire were concerned because the Act would allow banks to own up to 100 percent of an ETC. This breached the tradition of separating banking institutions from commercial enterprises, which dated from the Civil War. *"The breach of the tradition would adversely affect not only the safety and soundness of U.S. banks, but also their role as impartial arbiters of credit,"* said Henry C. Wallich in a Fed report.[6]

Control of such an enterprise commonly would imply the existence of a commitment on the part of the bank to place its full resources behind the subsidiary. The Fed therefore felt banks could easily expose themselves to great amounts of risk if they were to become 100-percent owners. *"Trading companies are likely to be highly leveraged, and, as commercial concerns, they would operate outside the traditional financial areas where banks have developed expertise,"* Wallich noted.[7]

The Fed's major concern was that the Act might adversely affect the level of competition and the impartiality in the granting of credit. The Board also feared the increased exposure to risk—a loss by a single bank could promote a general distrust of other banks engaged in similar activities. This could threaten the banking industry as a whole. The Fed therefore proposed that bank ownership of ETCs be limited to less than 20 percent.

Limiting a bank's involvement to less than 20 percent significantly reduces any incentive for it to engage in unsound endeavors in a quest for short-term benefits. A 20-percent level of ownership, under the rules of equity accounting, allows a bank to include a proportional share of the earnings of the ETC in its own earnings statement, providing a possible motive for it to push an ETC into relatively risky types of operations in the hope of realizing immediate gains.[8] The lower level of ownership, however, only permits a bank to include in its earnings statement any dividends received from the ETC.

The Senate, influenced by the economic ills facing the United States and lured by the increased exports that proponents promised, passed the Act. Even Proxmire, a staunch supporter of the Fed's position, saw that the benefits of the Act outweighed its possible deficiencies and voted for it. It is easy to understand why Proxmire cast an affirmative vote, if one considers the possible boost the Act could give to United States exports. Only 1 percent of United States firms account for approximately 80 percent of our exports.[9]

A majority of United States firms are not exporting their products, even though they could be competitive in the world market. A U.S. Department of Commerce estimate finds that the products of more than 25,000 small- and medium-sized firms in the United States would be competitive in world markets, but are not being marketed there.[10] These are the companies the ETC Act particularly would benefit.

Conclusion

The ETC concept has a proven record as a successful tool for facilitating exports. It has helped Japan become one of the great world exporting nations, and it has benefited many European nations as well. Now it is the turn of the United States, where the ETC offers an important and exciting new business opportunity. ETCs could increase employment in the United States by 320,000-640,000 workers this year, according to a Chase Electronics estimate.[11] This increase would be entirely attributable to increased exports. It is the kind of boost the American economy needs.

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Endnotes

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[3] Henry C. Wallich, *"Statement to Congress,"* **Federal Reserve Bulletin**(March 1981), pp. 233-235.

[4] Ibid.

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[6] George J. Stathakis, *"Creation of a U.S. Trading Company,"* **Via Port New York, New York**(October 1982), p. 5.

[7] William Scouton, *"Export Trading Company Act of 1982,"* **Business America**(October 1982), p. 3.

[8] Yoshi Tsurumi, *"Export Trading Act of the United States: The Beginning of a New Industrial Policy,"* **Pacific Basin Quarterly**(Fall 1982), pp. 3-4.

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